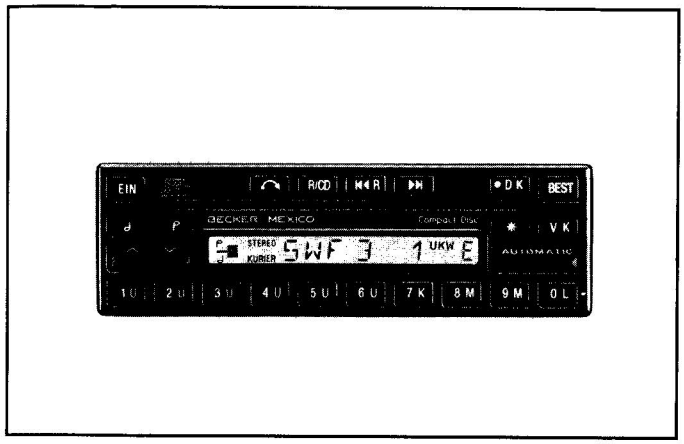



BECKER AUTORADIO

# Technische Information

# Mexico Compact Disc 860

**Gültig ab Gerät Nr. T 8000001**
**Valid from set No. T 8000001**
**Valable à partir de No. T 8000001**

## Technische Daten:

**Versorgungsspannung:**
12 V–

**Stromverbrauch bei Wiedergabe:**
840 mA

**beim Laden und Entladen der Platte**
2 A

**Anzahl der Kanäle:**
2

**Frequenzbereich:**
40 Hz bis 20 kHz

**Dynamikumfang:**
Signal/Rausch-Abstand
≧ 65 dB

**Klirrfaktor:**
≦ 0,12% (1 kHz)

**Kanaltrennung:**
≧ 60 dB

**Klangregelbereich:**
Tiefen ± 12 dB (60 Hz)
Höhe ± 12 dB (14 kHz)

**Abtastfrequenz:**
44,1 kHz

**Quantisierung:**
16 bit linear/Kanal

**Audiobitstrom:**
1,4112 M bit/s

**Übertragungsrate:**
2,03 M bit/s
(vor Modulation)

**Modulationssystem:**
EFM (Eight to Forteen Modulation)

**Fehlerkorrektursystem:**
CIRC (Cross Interleave Reed Solomon Code)

## Technical Data:

**Power supply:**
12 V–

**Current drain (playback)**
840 mA

**(during disc loading or eject)**
2 A

**Number of channels**
2

**Frequency range**
40 Hz – 20 kHz

**Dynamic range:**
Signal to noise ratio
≧ 65 dB

**Distortion factor:**
≦ 0.12% (1 kHz)

**Channel separation:**
≧ 60 dB

**Tone controls:**
bass ± 12 dB (60 Hz)
treble ± 12 dB (14 kHz)

**Sampling frequency:**
44.1 kHz

**Quantization:**
16 bit linear/channel

**Audiobit current:**
1.4112 M bit/s

**Transfer rate:**
2.03 M bit/s
(before modulation)

**Modulation system:**
EFM (Eight to Forteen Modulation)

**Error correction system:**
CIRC (Cross Interleave Reed Solomon Code)

## Caractéristiques techniques:

**Tension d'alimentation:**
12 V–

**Consommation de courant (playback)**
840 mA

**(pendant charge ou éjection du disc)**
2 A

**Nombre des canaux**
2

**Gamme de fréquence**
40 Hz – 20 kHz

**Gamme dynamique:**
Rapport signal/bruit
≧ 65 dB

**Facteur de distorsion:**
≦ 0,12% (1 kHz)

**Séparation des canaux:**
≧ 60 dB

**Contrôle de tonalité:**
bass ± 12 dB (60 Hz)
aigus ± 12 dB (14 kHz)

**Fréquence de balayage:**
44,1 kHz

**Quantification:**
16 bit linéaire/canal

**Courant audio bit:**
1,4112 M bit/s

**Facteur de transfer:**
2,03 M bit/s
(avant modulation)

**Système de modulation:**
EFM (Eight to Forteen Modulation)

**Système pour correction des erreurs:**
CIRC (Cross Interleave Reed Solomon Code)

## VORSICHT

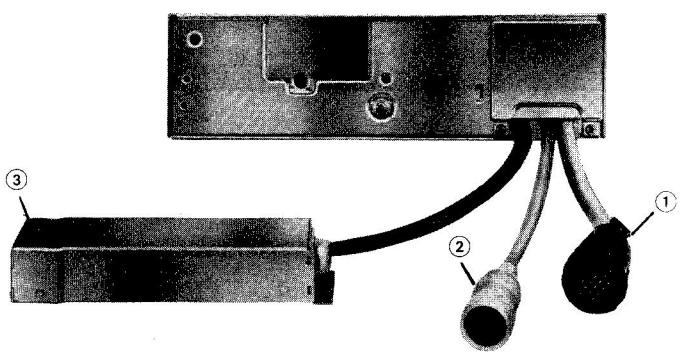
Beim Bedienen/Warten des Geräts nicht zu nahe mit den Augen an den Laserauslaß herankommen. Falls es notwendig ist, die Laserausstrahlung zu überprüfen, müssen Sie sicherstellen, daß Sie mehr als 30 cm mit den Augen von der Oberfläche der Objektivlinse auf dem optischen Abtasterblock entfernt sind.

## WARNING

When servicing, do not approach the laser exit with the eye too closely. In case it is necessary to confirm laser beam emission, be sure to observe from a distance of more than 30 cm from the surface of the objective lens on the optical pick-up block.

## ATTENTION

En opérant/soigner l'appareil, n'approcher pas vos yeux à la sortie laser. Si un contrôle du rayonnement laser est nécessaire, vous devez vous assurer, que vos yeux sont plus de 30 cm loin de la surface de la lentille d'objectif sur le bloc de balayage optique.




## Anschlußanweisung

① Anschluß Empfängerteil-CD-Gerät
② NF-Anschluß
③ Gleichspannungs-Konverter

## Connection instructions

① Connection receiver – CD-player
② AF-connection
③ Direct voltage converter

## Instructions de raccordement

① Raccordement récepteur – lecteur CD
② Raccordement BF
③ Convertisseur de tension continue

Änderungen vorbehalten / Modifications reserved / Modifications réservées

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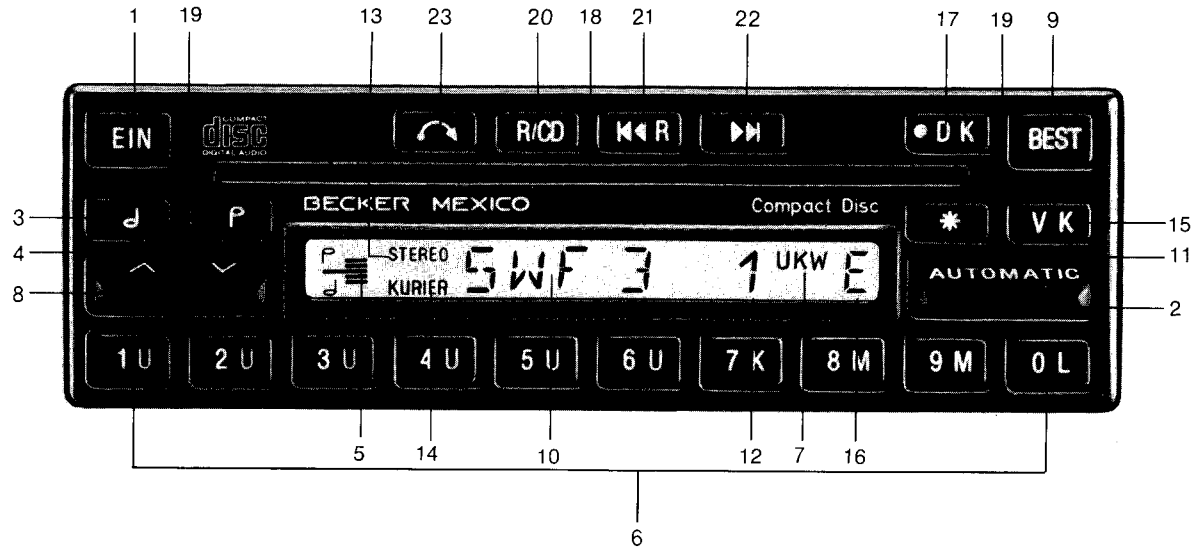
## Bedienfunktionen

## Operational functions

## Eléments de commande




1 Ein-/Aus-Taste
2 Lautstärketaste
3 Klangtaste, Bässe
4 Klangtaste, Höhen
5 Klangeinstellungsanzeige
6 Wellenbereichs-, Stationstasten und Frequenzeingabetasten
7 Wellenbereichsanzeige
8 Automatiktaste
9 BEST-Taste
10 Anzeige für Senderfrequenz, Sendeanstalt und Programm sowie Betriebszustand
11 Funktionstaste
12 Anzeige für gedrückte Stationstaste
13 STEREO-Anzeige
14 KURIER-Anzeige
15 Verkehrsfunktaste
16 Verkehrsfunkbereichsanzeige
17 Stummschalttaste
18 CD-Schacht
19 Leuchtdioden
20 R/CD-Taste
21 Titelsuchlauf-Taste (rückwärts)
22 Titelsuchlauf-Taste (vorwärts)
23 Auswurf-Taste

1 ON/OFF key
2 Volume control
3 Tone control, bass
4 Tone control, treble
5 Indication for tone control
6 Wave band-, station recall-, and frequency input keys
7 Wave band indicator
8 AUTOMATIC bar
9 BEST-key
10 Indicator for station frequency, broadcasting corporation, program, and operating mode
11 Function control key
12 Indication for pressed station recall key
13 STEREO indicator
14 KURIER-indicator
15 Traffic radio key
16 Indication for traffic radio range
17 Mute tape key
18 CD-slot
19 Light diodes
20 R/CD-key
21 Selection key/backward
22 Selection key/forward
23 Eject button

1 Marche/Arrêt
2 Contrôle de volume
3 Contrôle de tonalité, graves
4 Contrôle de tonalité, aigus
5 Indicateur du contrôle de tonalité
6 Touches de gammes d'ondes, de sélection des stations, et d'entrée de fréquence
7 Indicateur de gamme d'onde
8 Touche de recherche automatique
9 Touche BEST
10 Affichage digital de fréquence, de l'indicatif de station, du programme, et du mode d'opération
11 Touche de fonction
12 Indicateur de la station sélectionée des stations appuyée
13 Indicateur «STEREO»
14 Indicateur «KURIER»
15 Touche d'informations routières
16 Indicateur pour zone d'informations routières
17 Mise en veille
18 Logement de chargement du disque
19 Diodes luminescentes
20 Touche R/CD
21 Touche de sélection (arrière)
22 Touche de sélection (avant)
23 Touche d'éjection

### Bitte beachten:

Einbaulage CD-Spieler max. ± 20°, sonst korrekte Funktion nicht mehr gewährleistet.

### Attention:

Installation position of CD-player max. ± 20°, otherwise correct function is not guaranteed!

### Attention:

Position d'installation du CD-player max. ± 20°, autrement la fonction correcte n'est pas quarantie!

### Achtung!

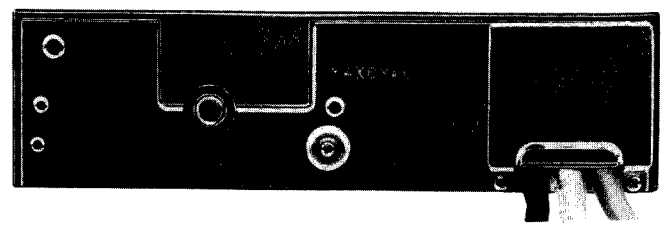
Vor der Installation nehmen Sie die rote Transportschraube an der Rückseite heraus und bewahren Sie für spätere Transportzwecke in dem dafür vorgesehenen Gewinde auf (siehe Bild).

### Attention!

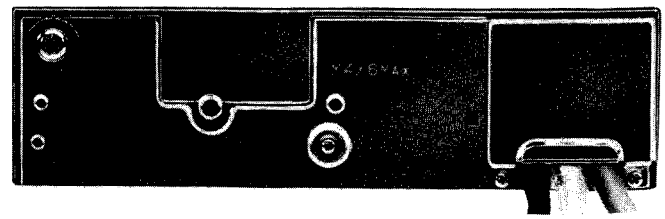
Before installation remove the red transport screw at the back and keep it in the marked out thread for later transports (see fig.)

### Attention!

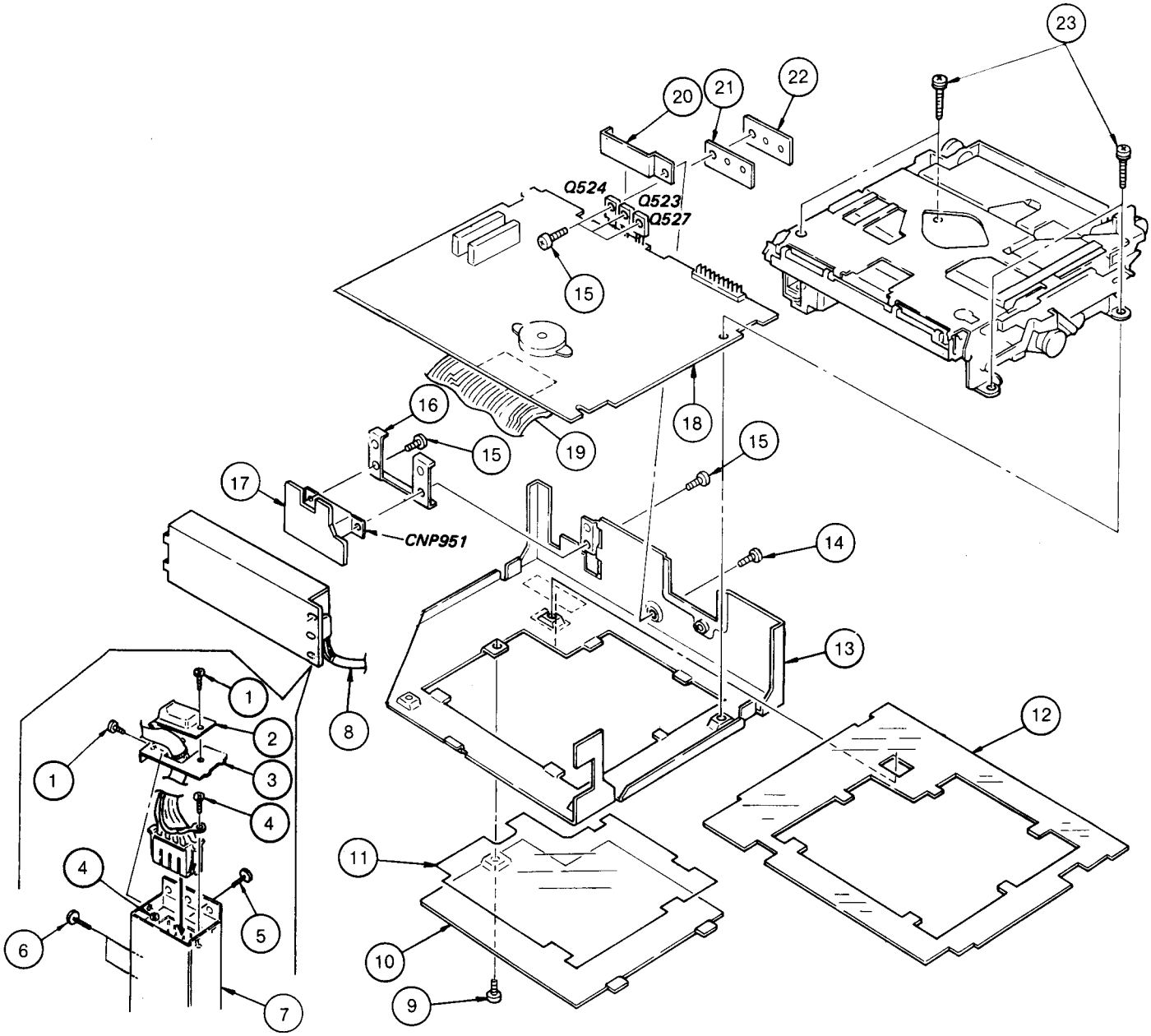
Avant l'installation enlever la vis de transport rouge au fond et garder la pour transports postérieurs dans le filetage prévu (voir fig.)



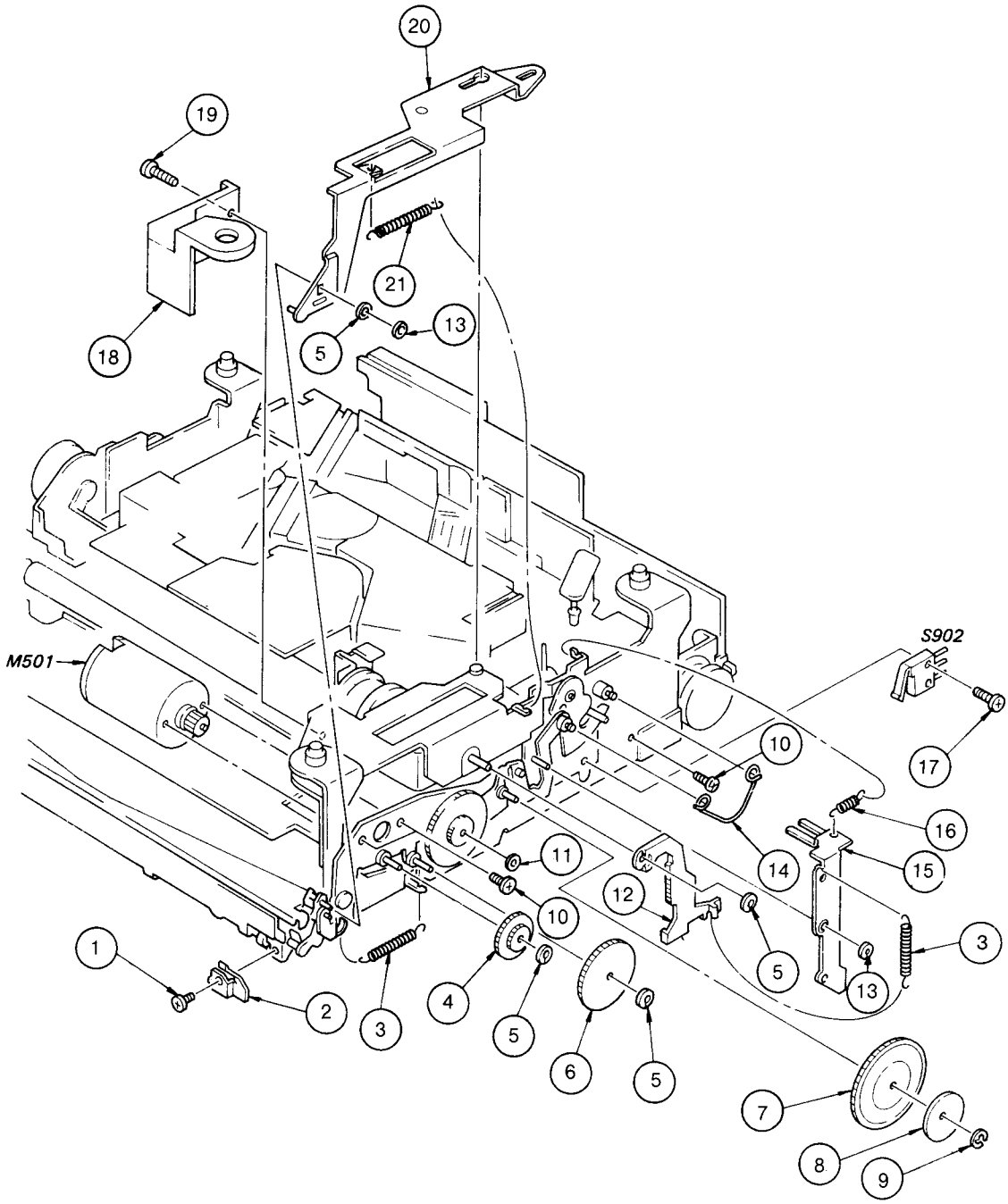
Gerät mit Transportschraube gesichert
Radio secured with transport screw
Radio securée avec vis de transport



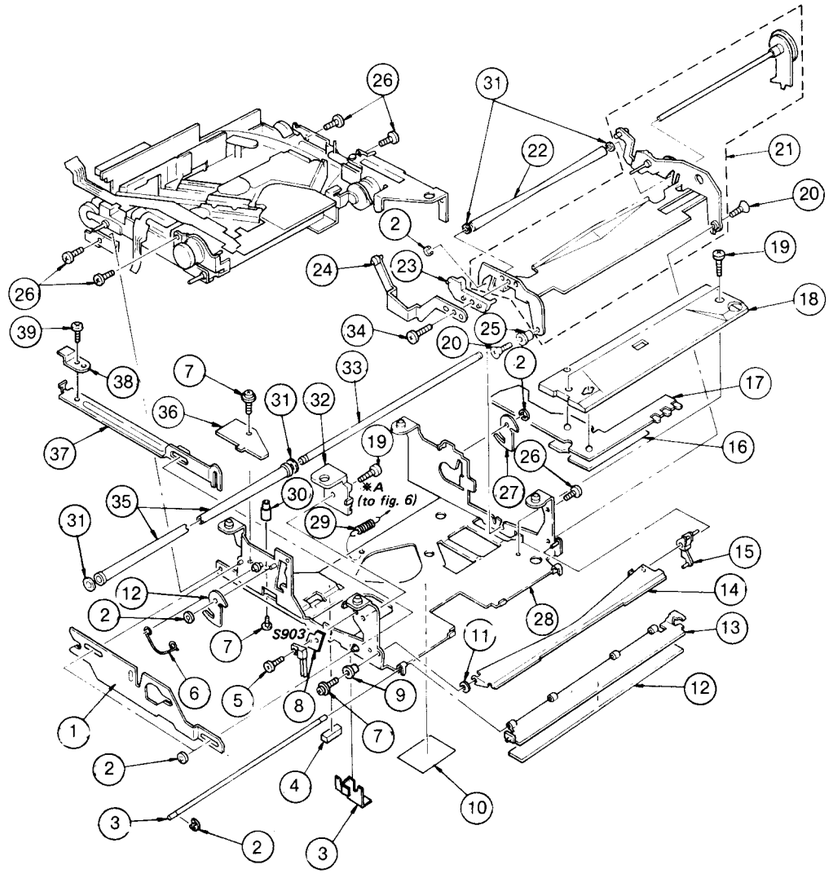
Transportschraube im Aufbewahrungsgewinde
Screw in thread for later transports
Vis dans filetage pour transports postérieurs



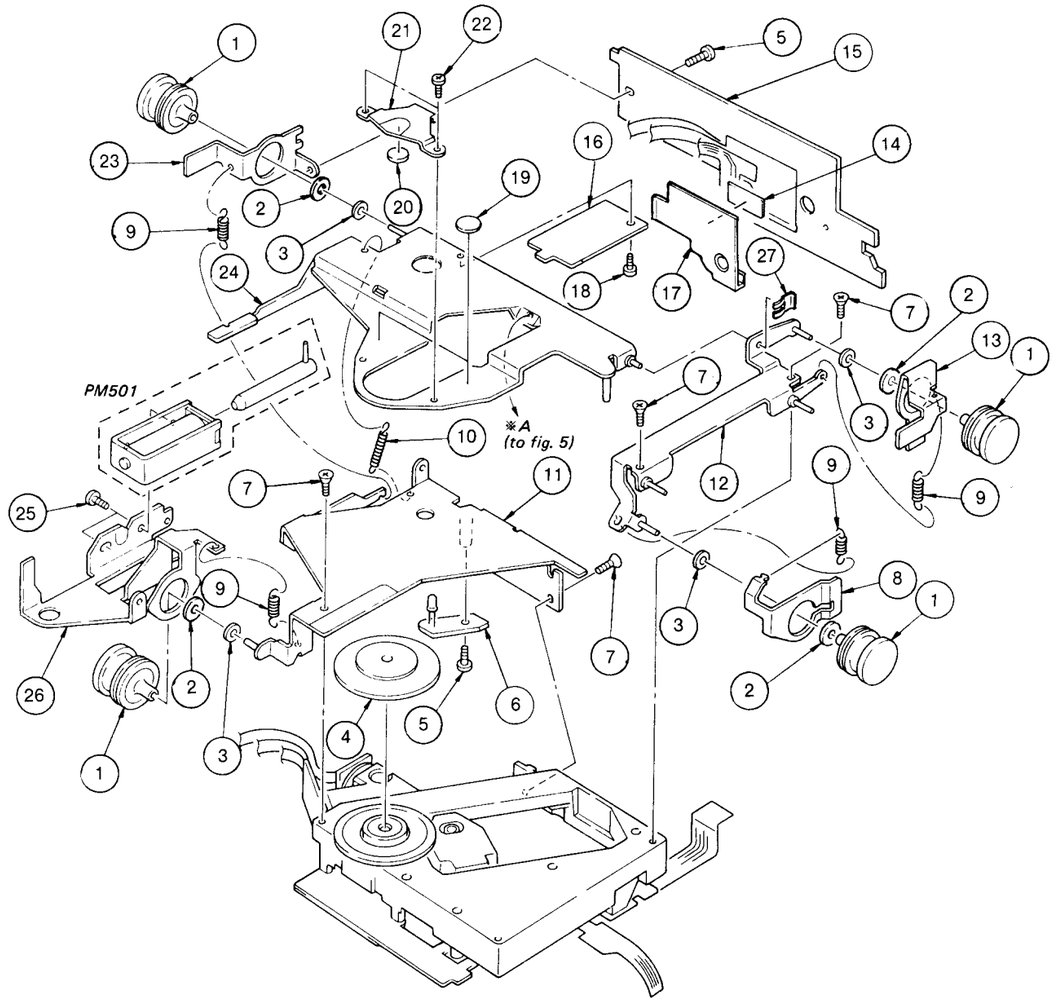

| Pos. Nr.<br>Pos. No.<br>Pos. No. | Benennung | Denomination | Dénomination | Best.-Nr.<br>Part. No.<br>No. de commande |
|---|---|---|---|---|
| 1 | Schraube 2,6x4 | Screw +Ps 2.6x4 | Vis 2,6x4 | 597.961–201 |
| 2 | Kabelhalter | Stopper (c) cord | Support de câble | 597.228–261 |
| 3 | Stütze | Bracket | Appui | 597.211–262 |
| 4 | Schraube, +B 2,6x4 | Screw, +B 2.6x4 | Vis, +B 2,6x4 | 597.775–201 |
| 5 | Schraube, +k 2,6x4 | Screw, +k 2.6x4 | Vis, +k 2,6x4 | 597.740–204 |
| 6 | Schraube 2,6x5 | Screw 2.6x5 | Vis 2,6x5 | 597.929–201 |
| 7 | Spannungswandler kpl. | Converter unit Dc-Dc | Transformateur de tension cpl. | 596.558–346 |
| 8 | Kabel (mit Stecker) | Cord (with conn.) | Câble (avec fiche) | 596.647–276 |
| 9 | Präzisionsschraube 2x2 | Screw 2x2 | Vis de précision 2x2 | 597.872–201 |
| 10 | Deckel | Cover | Couvercle | 597.244–284 |
| 11 | Isoliereinlage | Sheet (B) insul. | Plaque isolante | 597.457–271 |
| 12 | Isoliereinlage | Sheet insul. | Plaque isolante | 597.384–271 |
| 13 | Gehäuse, unten | Case lower | Carter, bas | 597.279–284 |
| 14 | Schraube, +B 2,6x4 | Screw, +B 2.6x4 | Vis, +B 2,6x4 | 597.775–201 |
| 15 | Schraube 3x5 | Screw 3x5 | Vis 3x5 | 597.953–201 |
| 16 | Halter | Bracket, capacitor | Support | 597.465–261 |
| 17 | Schaltplatte, Verbindung | PC-board, PWR con. | Circuit de connexion | 596.809–373 |
| 18 | Hauptschaltplatte | PC-board assy, main | Circuit général | 595.047–373 |
| 19 | Schaltungsplatte Display | PC-board display | Circuit d'affichage digital | 595.004–373 |
| 20 | Halteblech-Transistor | Retainer, transistor | Tôle de maintien, transistor | 597.201–261 |
| 21 | Wärmeableitfolie | Sheet, radiation | Feuille de dérivation de chaleur | 597.376–296 |
| 22 | Wärmeleitblech | Heat sink | Tôle conductrice de chaleur | 597.198–296 |
| 23 | Schraube 2,6x10 | Screw 2.6x10 | Vis 2,6x10 | 597.937–201 |



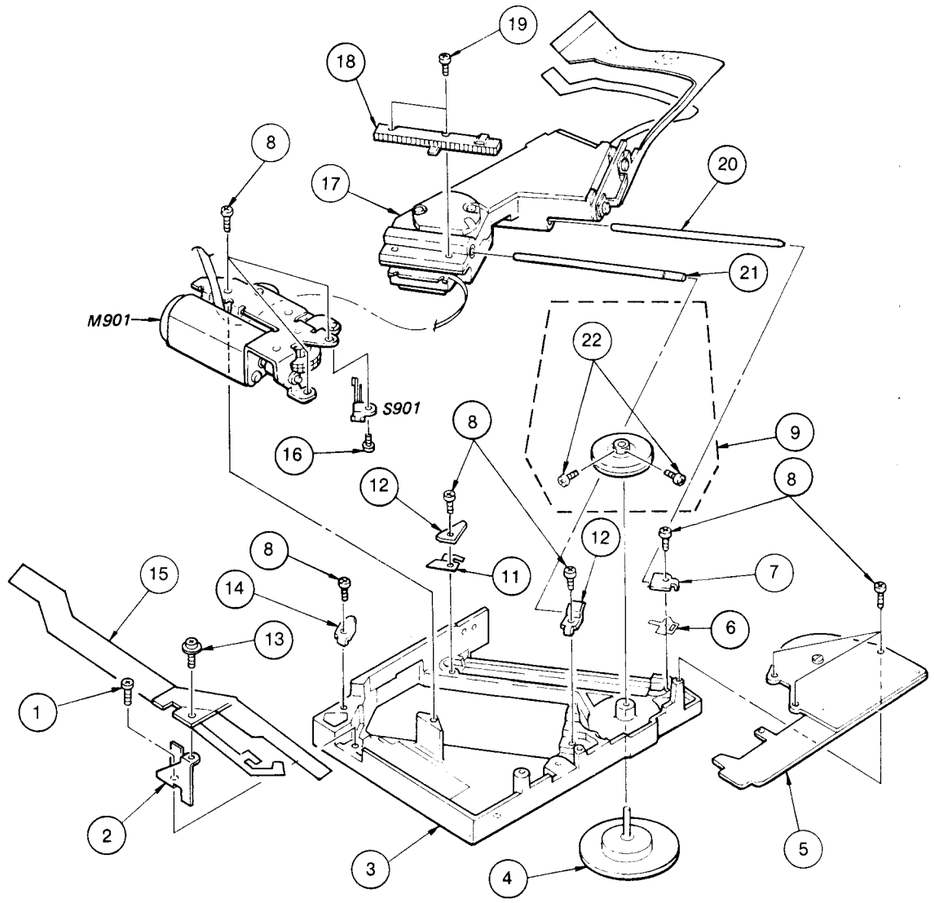

| Pos. Nr.<br>Pos. No.<br>Pos. No. | Benennung | Denomination | Dénomination | Best.-Nr.<br>Part. No.<br>No. de commande |
|---|---|---|---|---|
| 1 | Schraube ml 4x4 | Screw ml 4x4 | Vis ml 4x4 | 597.708-201 |
| 2 | Haltefeder | Spring | Ressort de maintien | 597.082-246 |
| 3 | Zugfeder | Spring, tension | Ressort de tension | 597.449-245 |
| 4 | Antriebsrad | Gear (A) | Roue de commande | 597.104-248 |
| 5 | Sicherungsscheibe | Poly-washer (DIA 1.2) | Disque de sécurité | 597.570-213 |
| 6 | Antriebsrad | Gear | Roue de commande | 597.112-248 |
| 7 | Antriebsrad | Gear, down | Roue de commande | 597.120-248 |
| 8 | Federscheibe | Spring | Rondelle élastique | 596.991-213 |
| 9 | Sicherungsscheibe 1,2 | Ring, retaining | Disque de sécurité | 597.791-213 |
| 10 | Schraube, präz. +p 2x2 | Screw, +p 2x2 | Vis de précision, +p 2x2 | |
| 11 | Sicherungsscheibe | Ring, retaining E-12 | Disque de sécurité | 597.643-213 |
| 12 | Zahnsegment | Rack | Segment denté | 597.163-247 |
| 13 | Sicherungsscheibe | Rack, retaining | Disque de sécurité | 597.597-213 |
| 14 | Spannfeder (Stahl) | Spring | Griffe (acier) | 597.406-246 |
| 15 | Umschalthebel | Lever assy, rack | Levier de commutation | 595.454-241 |
| 16 | Zugfeder | Spring, tension | Ressort de tension | 597.430-245 |
| 17 | Schraube präz. +p 1,7x4 | Screw +p 1.7x4 | Vis de précision +p 1,7x4 | 597.864-201 |
| 18 | Halter | Holder | Support | 597.041-262 |
| 19 | Schraube, +p 2x4 | Screw, +p 2x4 | Vis, +p 2x4 | 597.732-201 |
| 20 | Schieber | Lever assy, joint, solenoid | Curseur | 595.446-240 |
| 21 | Zugfeder | Spring, tension | Ressort de tension | 597.554-245 |
| M501 | Motor (DC) | Motor | Moteur (DC) | 595.012-393 |
| S902 | Microschalter | Micro switch | Commutateur micro | 596.612-278 |




| Pos. Nr.<br>Pos. No.<br>Pos. No. | Benennung | Denomination | Dénomination | Best.-Nr.<br>Part. No.<br>No. de commande |
|---|---|---|---|---|
| 1 | Schieber | Hook (B), lock | Curseur | 597.155–240 |
| 2 | Sicherungsscheibe 1,2 | Ring, retaining 1.2 | Disque de sécurité 1,2 | 597.791–213 |
| 3 | Achse | Shaft, door hinge | Axe | 597.181–243 |
| 4 | | | | |
| 5 | Schraube präz. +p 1,7x4 | Screw +p 1.7x4 | Vis de précision +p 1,7x4 | 597.856–201 |
| 6 | Spannfeder (Stahl) | Spring | Griffe (acier) | 597.406–246 |
| 7 | Schraube ml, 4x3 | Screw ml, 4x3 | Vis ml, 4x3 | 597.686–201 |
| 8 | Isolierscheibe | Sheet (leaf sw) insul. | Disque isolante | 597.414–271 |
| 9 | Führungshülse, rechts | Retainer (right), door | Cosse de guidage, droit | 596.973–235 |
| 10 | | | | |
| 11 | Sicherungsscheibe | Ring, retaining | Disque de sécurité | 597.643–213 |
| 12 | | | | |
| 13 | Verschlußklappe | Hinge assy, door | Clapet | 595.225–241 |
| 14 | Sperrblech | Retainer, door | Plaque d'arrêt | 597.171–241 |
| 15 | Verschlußklappenhebel | Arm assy, door | Levier de clapet | 595.195–241 |
| 16 | Isolierleiste | Sheet, insul. | Bande isolante | 597.341–271 |
| 17 | Schaltplatte, DET | PC-board, DET (B) | Circuit DET | 596.851–373 |
| 18 | Disc-Führung | Guide, disc | Guidage, disc | 597.147–241 |
| 19 | Schraube +p 2x4 | Screw +p 2x4 | Vis +p 2x4 | 597.732–201 |
| 20 | Schraube +k 2x4 präz. | Screw +k 2x4 | Vis de précision +k 2x4 | 597.831–204 |
| 21 | Walzenhalterung | Arm assy, driving roller | Support de rouleau | 595.268–261 |
| 22 | Walze, unten | Roller, lower assy | Rouleau, bas | 595.020–248 |
| 23 | Halter, Kontaktfeder | Holder, contact spring | Support, ressort de contact | 597.066–262 |
| 24 | Hebelarm | Arm assy, support | Branche | 595.217–241 |
| 25 | Rolle, rechts | Shaft, right, roller arm | Rouleau, droit | 597.333–248 |
| 26 | Schraube präz. +p 2x2 | Screw +p 2x2 | Vis +p 2x2 | 597.872–201 |
| 27 | Verriegelungshaken | Hook, lock | Crochet de verrouillage | 597.422–241 |
| 28 | Rahmen | Frame assy, MD | Cadre | 595.276–288 |
| 29 | Feder | Spring | Ressort | 597.600–245 |
| 30 | Narbe | Hook (c), lock | Marque | 597.090–227 |
| 31 | Unterlegscheibe | Washer | Rondelle | 597.661–216 |
| 32 | Halter | Holder (B) | Support | 597.041–262 |
| 33 | Welle oben | Shaft, roller, upper | Arbre, haut | 595.381–248 |
| 34 | Schraube +b 2x6 | Screw +b 2x6 | Vis +b 2x6 | 597.767–201 |
| 35 | | | | |
| 36 | Schaltplatte, Schalter | Switch assy | Circuit de commutateur | 596.817–373 |
| 37 | Umschalthebel | Lever assy, switch | Levier de commutation | 595.284–241 |
| 38 | Reflektorblech | Reflector, sw (A) | Tôle réflecteur | 597.325–254 |
| 39 | Schraube, präz. +p 1,4x2,5 | Screw +p 1.4x2.5 | Vis de précision, +p 1,4x2,5 | |
| S903 | Schalter | Switch | Commutateur | 596.604–278 |




| Pos. Nr.<br>Pos. No.<br>Pos. No. | Benennung | Denomination | Dénomination | Best.-Nr.<br>Part. No.<br>No. de commande |
|---|---|---|---|---|
| 1 | Dämpfer | Damper (2), hyper | Amortisseur | 597.368–294 |
| 2 | Unterlegscheibe Teflon | Washer, PTFE | Rondelle Teflon | 597.491–216 |
| 3 | Unterleggummi | Washer, rubber | Rondelle en caoutchouc | 597.392–294 |
| 4 | Andruckscheibe, unten | Plate sub assy, chuck | Disque de pression, bas | 595.039–248 |
| 5 | Schraube +p 2x4 | Screw +p 2x4 | Vis +p 2x4 | 597.732–201 |
| 6 | Schaltungsplatte LED | PC-board LED | Circuit LED | 596.833–373 |
| 7 | Schraube präz. +k 2x3 | Screw +k 2x3 | Vis +k 2x3 | 597.821–204 |
| 8 | Haltewinkel | Bracket (A), insul. | Angle d'arrêt | 597.015–262 |
| 9 | Zugfeder | Spring, tension | Ressort de tension | 597.627–245 |
| 10 | Zugfeder | Spring, tension | Ressort de tension | 597.562–245 |
| 11 | Chassishalterung | Chassis (A) assy, MD fitting | Support de chassis | 595.233–261 |
| 12 | Chassishalterung | Chassis (B) assy, MD fitting | Support de chassis | 595.241–261 |
| 13 | Haltewinkel | Bracket (C), insul. | Angle d'arrêt | 597.023–262 |
| 14 | Isolierplättchen | Sheet, insul. | Plaque isolante | 597.724–271 |
| 15 | HF-Verstärkerplatte | PC-board RF amp. | Circuit amplificateur HF | 595.055–373 |
| 16 | Schaltungsplatte, DET | PC-board DET | Circuit DET | 596.825–373 |
| 17 | Halteblech, Flexleitung | Retainer, flexible | Tôle de maintien, câble flexible | 597.481–261 |
| 18 | Schraube präz. +p 2x2 | Screw +p 2x2 | Vis de précision +p 2x2 | 597.872–201 |
| 19 | Abstandsgummi | Cushion, rubber | Rondelle de distance | 598.542–294 |
| 20 | Gummischeibe | Sheet, thrust, retainer | Disque en caoutchouc | 597.074–217 |
| 21 | Haltebügel | Retainer, thrust | Etrier de maintien | 596.981–262 |
| 22 | Schraube präz. +p 1,7x1,6 | Screw +p 1.7x1.6 | Vis de précision +p 1,7x1,6 | 597.848–201 |
| 23 | Stütze | Bracket (D), insul. | Appui | 597.031–262 |
| 24 | Schwenkebene | Arm assy, chucking | Platine d'entraînement mobile | 595.187–242 |
| 25 | Schraube +b 2,6x3 | Screw +b 2.6x3 | Vis +b 2,6x3 | 597.783–201 |
| 26 | Haltebügel | Bracket (B) assy | Etrier de maintien | 595.251–261 |
| 27 | Sicherungsscheibe 1,5 | Stop ring 1.5 | Disque de sécurité 1,5 | 597.805–213 |
| PM501 | Zugmagnet | Plunger | Electro-aimant d'attraction | 596.531–337 |




## Fokusverstärkerjustierung
**– Grobeinstellung –**

Diese Justierung sollte vorgenommen werden, wenn folgende Bauteile ersetzt werden:
- FOP
- RV 502

**Verfahren:**
1. RV 502 auf der Hauptplatine in Mittenstellung setzen.
2. Es sollte kein abnormales Betriebsgeräusch (weißes Rauschen) auftreten.
   Falls doch, RV 502 leicht gegen Uhrzeigersinn drehen.

**PLL-Freilauf-Frequenz-Kontrolle**
**– Grobeinstellung –**
**Verfahren:**

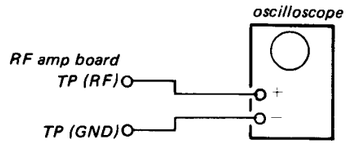
1. Laufwerk und Verbindungsstück von Gerät entfernen. (Von der Hauptplatine abklemmen).
2. TP (5 SW) und TP (GND) auf Hauptplatine mit Leitungsdraht kurzschließen.
3. Frequenzzähler an Testpunkte (PLCK), (GND) auf der Hauptplatine anschließen.
4. Hauptschalter einschalten und L 501 auf 4.2718 MHZ einstellen.
5. Leitungsdraht von TP 5 SW + GND wieder abklemmen.

## Focus Gain Adjustment
**– Coarse Adjustment –**

This adjustment should be performed when replacing the following components.
- FOP
- RV 502

**Procedure:**
1. Set RV 502 on the main board to mechanical center.
2. Check that there is not an abnormal amount of operation noise (white noise) from the 2-axis device.
   If there is, turn RV 502 slightly counterclockwise.

**PLL Free-Run Frequency Check**
**– Coarse adjustment –**
**Procedure:**




1. Remove the mechanism and the connector from the set. (Disconnect from the main board).
2. Short between TP (5 SW) and TP (GND) on the main board with a lead wire.
3. Connect a frequency counter to the test points (PLCK), (GND) on the main board.
4. Turn on the power switch and adjust L 501 for 4.2718 MHz reading on the frequency counter.
5. Disconnect the lead wire in step 1.

## Ajustage de l'amplificateur du foyer
**– Réglage approximatif –**

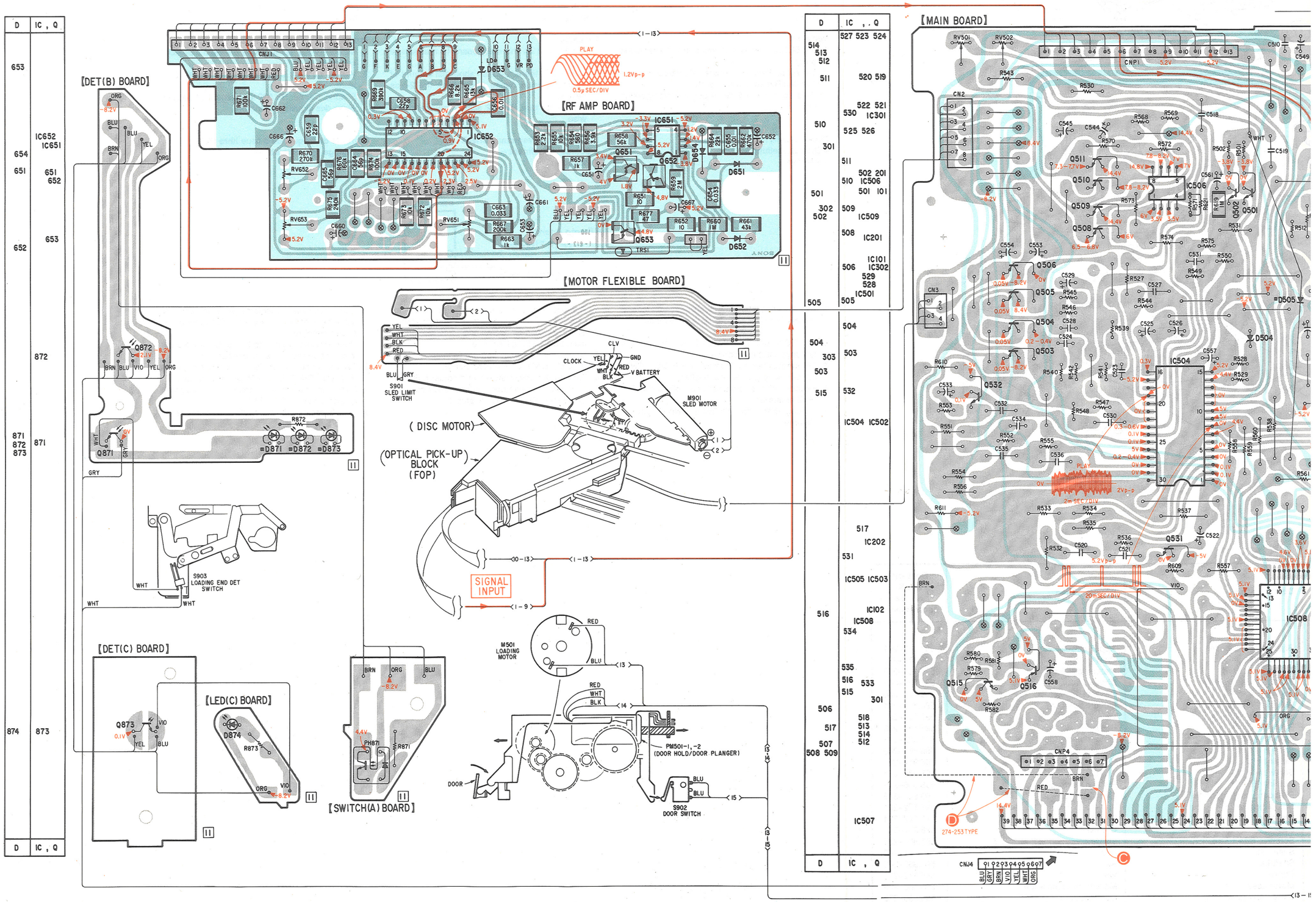
Faire cet ajustage en remplaçement les pièces suivantes:
- FOP
- RV 502

**Procédure:**
1. Mettre RV 502 sur le circuit principal à position centrale.
2. Vérifier qu'il n'y a pas de bruit anormal (bruit blanc).
   Si donc, tourner RV 502 légèrement en sens inverse des aiguilles de montre.

**Contrôle de fréquence à roue libre PLL**
**– Réglage approximatif –**
**Procédure:**

1. Déconnecter le mécanisme de roulement et la pièce de jointure de l'appareil (déconnecter du circuit principal).
2. Court-circuiter points de test 5 SW et GND sur le circuit principal avec fil conducteur.
3. Raccorder compteur de fréquence aux points de test PLCK, GND, sur le circuit principal.
4. Mettre en marche le commutateur principal et ajuster L 501 à 4.2718 MHz.
5. Déconnecter le fil conducteur des points de test 5 SW et GND.

| Pos. Nr.<br>Pos. No.<br>Pos. No. | Benennung | Denomination | Dénomination | Best.-Nr.<br>Part. No.<br>No. de commande |
|---|---|---|---|---|
| 1 | | | | |
| 2 | Stütze, Schaltungsplatte | Bracket, +PC-board | Appui, circuit | 597.317–262 |
| 3 | Chassis kompl. | Chassis assy | Chassis cpl. | 595.179–286 |
| 4 | Drehteller | Turntable assy | Plateau de torsion | 595.152–263 |
| 5 | Statorschaltungsplatte | PC-board assy, stator | Circuit stator | 595.136–373 |
| 6 | Blattfeder | Spring (B), leaf | Ressort à lames | 596.965–246 |
| 7 | Klemmstück | Retainer (D) | Pièce de serrage | 596.922–241 |
| 8 | Schraube ml, 4x4 | Screw ml, 4x4 | Vis ml, 4x4 | 597.708–201 |
| 9 | Rotor | Rotor assy | Rotor | 595.144–248 |
| 10 | Klemmstück | Retainer (A) | Pièce de serrage | 596.862–241 |
| 11 | Blattfeder | Spring (A) leaf | Ressort à lames | 596.565–246 |
| 12 | Klemmstück | Retainer (C) | Pièce de serrage | 596.914–241 |
| 13 | Schraube ml, 4x3 | Screw ml, 4x3 | Vis ml, 4x3 | 597.686–201 |
| 14 | Klemmstück | Retainer (B) | Pièce de serrage | 596.906–241 |
| 15 | Schaltungsplatte, Motor | PC-board, motor flexible | Circuit de moteur | 596.841–373 |
| 16 | Schraube präz. +p 2x2,5 | Screw +p 2x2.5 | Vis +p 2x2,5 | 597.872–201 |
| 17 | Optikblock | Device optical | Bloc optique | 595.322–304 |
| 18 | Zahnstange | Rack | Crémaillère | 596.957–247 |
| 19 | Schraube präz. +P M 1,7x6 | Screw +P M 1.7x6 | Vis de précision +P M 1,7x6 | 597.864–201 |
| 20 | Achse | Shaft (B) | Axe | 596.949–243 |
| 21 | Achse | Shaft (A) | Axe | 596.930–243 |
| 22 | Schraube | Screw | Vis | 596.876–201 |
| M901 | Antriebsmotor | Motor assy, feed | Moteur de commande | 595.160–393 |
| S901 | Schalter | Switch leaf (sled limit) | Commutateur | 596.590–278 |


【DET(B) BOARD】
【RF AMP BOARD】
【MOTOR FLEXIBLE BOARD】
【MAIN BOARD】
【DET(C) BOARD】
【LED(C) BOARD】
【SWITCH(A) BOARD】
( DISC MOTOR)
(OPTICAL PICK-UP) BLOCK (FOP)
M901 SLED MOTOR
S901 SLED LIMIT SWITCH
S903 LOADING END DET SWITCH
M501 LOADING MOTOR
PM501-1, -2 (DOOR HOLD/DOOR PLANGER)
S902 DOOR SWITCH
SIGNAL INPUT
PLAY
0.5μSEC/DIV
1.2Vp-p
20mSEC/DIV
2mSEC/DIV
2Vp-p
CNJ1
CNP1
CNP4
CN2
CN3
CNJ4
IC651
IC652
IC501
IC502
IC503
IC504
IC505
IC506
IC507
IC508
IC509
IC510
IC101
IC102
IC201
IC202
IC301
IC302
D
IC , Q

【MAIN BOARD】

【RF AMP BOARD】

【MOTOR FLEXIBLE BOARD】

M901 SLED MOTOR

S902 DOOR SWITCH

PM501-1,-2 (DOOR HOLD/DOOR PLANGER)

| D | IC , Q |
|---|---|
| | 527 523 524 |
| 514 513 512 | |
| 511 | 520 519 |
| | 522 521 |
| 530 | IC301 |
| 510 | 525 526 |
| 301 | |
| 511 | |
| | 502 201 |
| 510 | IC506 |
| | 501 101 |
| 501 | |
| 302 502 | 509 IC509 |
| | 508 IC201 |
| | IC101 |
| 506 | IC302 |
| | 529 528 |
| | IC501 |
| 505 | 505 |
| | 504 |
| 504 | |
| 303 | 503 |
| 503 | |
| 515 | 532 |
| | IC504 IC502 |
| | 517 |
| | IC202 |
| 531 | |
| | IC505 IC503 |
| 516 | IC102 |
| | IC508 |
| | 534 |
| | 535 |
| 516 | 533 |
| 515 | 301 |
| 506 | 518 |
| 517 | 513 |
| | 514 |
| 507 | 512 |
| 508 509 | |
| | IC507 |

| D | IC , Q |
|---|---|
| | IC , Q |
| | D |

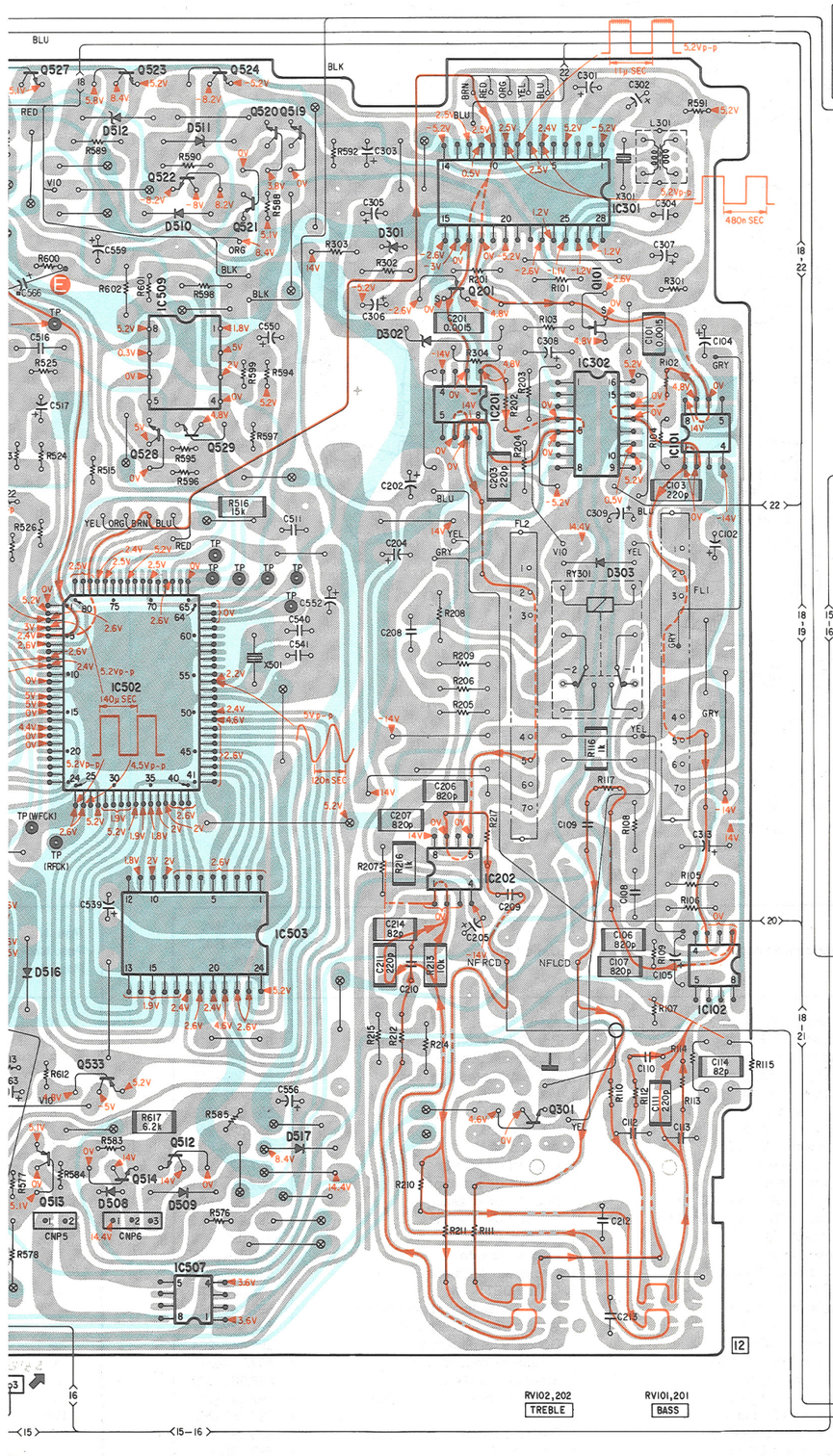
CNJ4: BLU GRY BRN VIO YEL WHT ORG

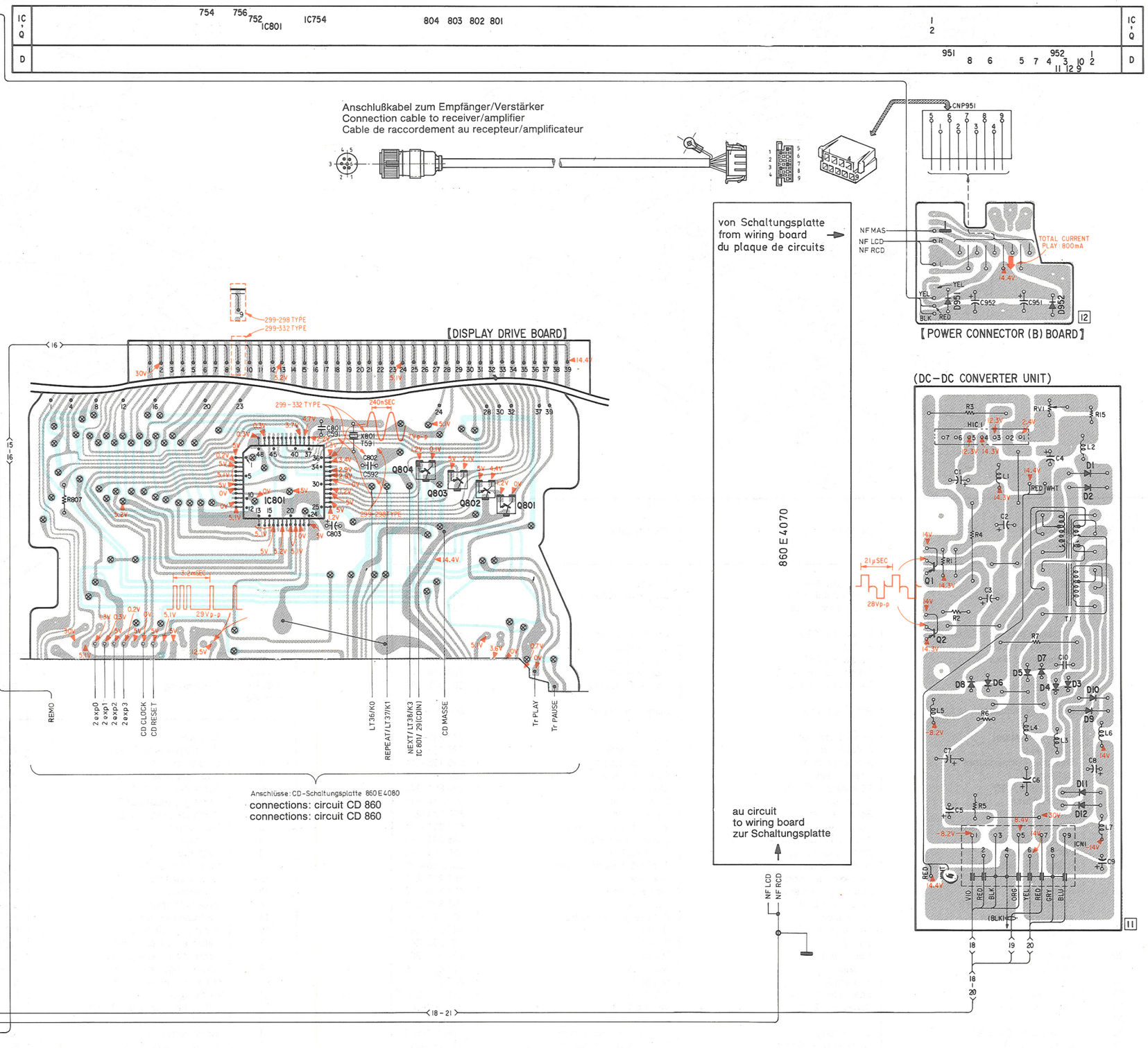
CNJ5: BLU RED

CNJ6: BLK WHT RED

RV102,202 TREBLE

RV101,201 BASS




Anschlußkabel zum Empfänger/Verstärker
Connection cable to receiver/amplifier
Cable de raccordement au recepteur/amplificateur






von Schaltungsplatte
from wiring board
du plaque de circuits

860 E 4070

au circuit
to wiring board
zur Schaltungsplatte

NF LCD
NF RCD

## – Vorsicht bei elektrostatischer Aufladung – Bemerkungen zur Handhabung des optischen Abtasterblockes

Die Laserdiode im optischen Abtasterblock muß vor elektrostatischer Aufladung durch Kleider und dem menschlichen Körper geschützt werden.
Untenstehende Anweisung wird Reparaturteilen beigefügt.
Befolgen Sie beim Reparieren diese Anleitung.
Das folgende Verfahren soll als Beispiel dienen:

1. Legen Sie ein leitendes Blech auf die Werkbank.
   (Das Schwarzblech, das als Reparaturteileumhüllung benutzt wird).
2. Legen Sie das Gerät so auf das leitende Blech, daß das Chassis das Blech berührt.
   (Dadurch erhält es das gleiche Potential/Spannung wie das leitende Blech).
3. Legen Sie Ihre Hände auf das leitende Blech.
   (Dadurch erhalten Sie die gleiche Spannung wie das Blech).
4. Nehmen Sie den optischen Abtasterblock aus dem Beutel (leitend).
5. Verrichten Sie die Arbeit auf dem leitenden Blech.
   Aufpassen, daß Kleidung optischen Abtasterblock nicht berührt.

**Anleitung (jedem Reparaturteil beigefügt)**

Beim Öffnen oder Reparieren eines Optikblocks ist folgendes Erdungsverfahren notwendig um Schäden durch statische Elektrizität zu verhindern.

1. **Erdung des menschlichen Körpers**
   Ziehen Sie einen Gelenkriemen für die Erdung über (Impedenz kleiner als $10^8$ Ohm), dessen anderes Ende geerdet ist. Der Riemen läßt die statische Elektrizität des menschlichen Körpers abfließen.
2. **Erdung der Arbeitsplatte**
   Legen Sie unbedingt ein leitendes Blech auf den Tisch (Impedenz kleiner als $10^9$ Ohm), z. B. ein geerdetes Kupferblech.
3. Da in Kleidern entstehende statische Elektrizität nicht abfließen kann, achten Sie darauf, daß Ihre Kleider nicht den Optikblock berühren.
4. **Handhabung der flexiblen Platte**
   Die flexible Platte kann leicht beschädigt werden und sollte sorgfältig gehandhabt werden.

## – Caution for Electrostatic Breakdown – Notes on handling the optical Pick-up Block

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
The printed matter below is included in the repair parts. During repair, use the procedure in the printed matter.
The following method is an example for reference purposes:

1. Place a conductive sheet on the workbench.
   (The black sheet used as repair parts wrapping).
2. Place the set on the conductive sheet so that the chassis touches the sheet. (This makes it the same potential as the conductive sheet).
3. Place your hands on the conductive sheet. (This makes them the same potential as the sheet).
4. Remove the optical pick-up block from the bag (conductive).
5. Perform work on top of the conductive sheet.
   Be careful that clothing does not touch the optical pick-up block.

**Printed Matter Included in the Repair Parts**

When opening or repairing an optical pick-up, the procedure for grounding as follows is required to prevent damage caused by static electricity.

1. **Grounding for the human body**
   Be sure to put on a wrist-strap for grounding (with impedance lower than $10^8$ Ohm) whose other end is grounded. The strap works to drain away the static electricity build-up on the human body.
2. **Grounding for the work table**
   Be sure to lay on the table a conductive sheet (with impedance lower than $10^9$ Ohm) such as a sheet of copper, which is grounded.
3. As static electricity build-up on clothes is not drainded away, be careful not to let your clothes touch the optical pick-up.
4. **Handling the flexible board**
   The flexible board is easily damaged and should be handled with care.

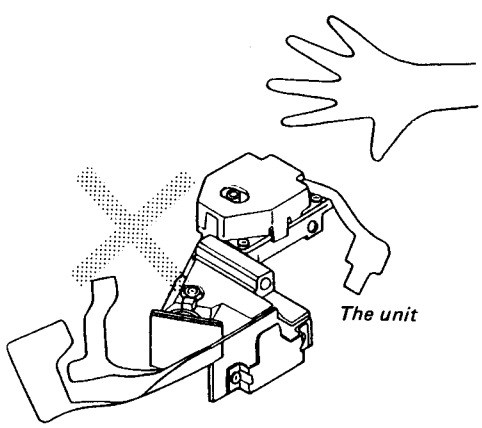
## – Attention à charge électrostatique – Notes sur maniement du bloc d'exploration optique

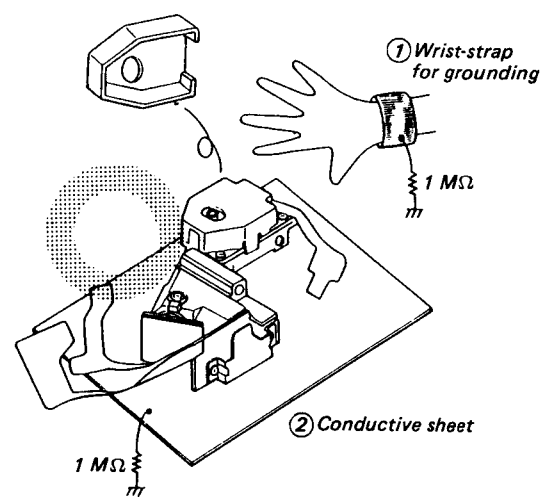
La diode laser dans le bloc d'exploration optique doit être protéger contre charge électrostatique, causé par vêtement et le corps humain.
Les instructions suivantes sont ajoutées aux pièces de réparation. Nous vous prions d'observer ces instructions pendant une réparation.
La méthode suivante sert comme exemple:

1. Mettre un sachet conducteur sur l'établi (le sachet noir utilisé comme enveloppe pour pièce de réparation).
2. Mettre l'appareil sur le sachet conducteur de manière que le châssis touche le sachet. (L'appareil reçoit le même potentiel que le sachet conducteur).
3. Mettre vos mains sur le sachet conducteur. (Vos mains reçoivent la même tension que le sachet).
4. Remettre le bloc d'exploration optique (conducteur) du sachet.
5. Faire le travail sur le sachet conducteur.
   Faire attention que vos vêtements ne touchent pas le bloc d'exploration optique.

**Instructions (ajoutées aux pièces de réparation).**
En ouvrant ou réparant un bloc optique, la méthode de prise de terre suivante est nécessaire pour empêcher des détériorations par électricité statique.

1. **Prise de terre du corps humain**
   Mettre une bande de jointure pour la prise de terre (impédance plus petit que $10^8$ Ohm); l'autre fin de la bande est mis à terre. La bande laisse s'écouler l'électricité statique du corps humain.
2. **Prise de terre de l'établi**
   Il est absoluement nécessaire de mettre une tôle conductrice sur l'établi (impédance plus petit que $10^9$ Ohm); p. ex. une tôle de cuivre, mise à terre.
3. Car l'électricité statique sur des vêtements ne peut pas s'écouler, faire attention que vos vêtements ne touchent pas le bloc optique.
4. **Maniement du circuit flexible**
   Parce qu'il est facile d'endommager le circuit flexible, il est nécessaire de manier celui-ci très soigneusement.



## Master CPU (Zentraleinheit) und Laufwerk-CPU

Dieses Gerät beinhaltet eine Master-CPU (IC 801), die das System kontrolliert und eine Laufwerk-CPU (IC 508), die das Laufwerk kontrolliert.

**– Schnittstelle zwischen Master CPU und Laufwerk CPU**
Die Master CPU (IC 801) steht mit der Laufwerk CPU (IC 508) in Verbindung, um Informationen zu erhalten und den Mechanismus des Laufwerks zu steuern, und um das System durch folgende Signale zu kontrollieren.

## Master CPU and Mechanism CPU

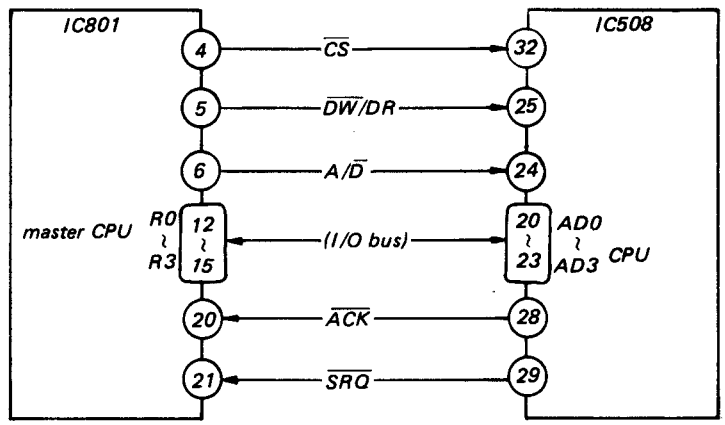
This set uses a master CPU (IC 801) which controls the system and a mechanism CPU (IC 508) which controls the mechanism.

**– Interface between Master CPU and Mechanism CPU**
The master CPU (IC 801) communicates with the mechanism CPU (IC 508) to get information and command the mechanism in order to control the system by the following signals.

## Master CPU et CPU du mécanisme de roulement

Cet appareil utilise un Master CPU (IC 801), qui contrôle le système, et un CPU du mécanisme de roulement (IC 508), qui contrôle le mécanisme de roulement.

**– Intersection entre Master CPU et CPU du mécanisme de roulement**
Master CPU (IC 801) est en connection avec le CPU du mécanisme de roulement (IC 508) pour recevoir des informations, pour contrôler le mécanisme de roulement, et pour contrôler le système par les signaux suivants:




**CS (Bausteinauswahl):**
Dieses Signal wird von der Master CPU ausgesandt, um die Laufwerk-CPU zu steuern.

**DW/DR (Daten schreiben/Daten lesen):**
Zeigt an, ob Master-CPU DATA (Daten) der Laufwerk-CPU schreiben oder lesen soll.

**A/D (Adressen/Daten):**
Zeigt an, ob Daten oder Adresse an Bus liegen.

**I/O (Ein-/Ausgangsbus):**
4 Bit-breiter Bus zwischen Master CPU und Laufwerk-CPU.

**ACK (Bestätigungssignal):**
Zeigt der Master-CPU an, daß die Laufwerk-CPU ein CS-Signal erhalten und den Befehl ausgeführt hat.

**SRQ (Service-Nachfrage):**
Zeigt der Master-CPU an, daß DATA (Daten) angezeigt werden sollen, da Daten sich verändert haben.

**CS (Chip Select):**
This signal is sent out from the master CPU to command the mechanism CPU.

**DW/DR (Data write/Data read):**
The signal which indicates if the master CPU should write or read the DATA of the mechanism CPU.

**A/D (Address/Data):**
Indicates if the signal on the bus line is an address signal or a data signal.

**I/O (Buss):**
4 bit bus line between the master CPU and the mechanism CPU.

**ACK (Acknowledge):**
The signal which indicates to the master CPU that the mechanism CPU has received a CS signal and has executed the command.

**SRQ (Service Request):**
The signal which indicates to the master CPU that DATA should be read out because a change has occurred.

**CS (Selection de chip):**
Signal du Master CPU pour contrôler le CPU du mécanisme de roulement

**DW/DR (Ecrire/lire des data):**
Indique, si Master CPU doit écrire ou lire des data du CPU du mécanisme de roulement.

**A/D (Adresse/Data):**
Indique, si le signal à bus est un signal d'adresse ou un signal de data.

**I/O (Bus d'entrée/sortie):**
4-bit bus entre Master CPU et CPU du mécanisme de roulement.

**ACK (Confirmation):**
Ce signal dit le Master CPU, que le CPU du mécanisme de roulement a reçu un signal CS et a exécuter la commande.

**SRQ (Service Request):**
Ce signal dit le Master CPU, que des data doivent être indiqués, parce qu'il y a un changement.

## Funktionstabelle / Master CPU / Tableau de fonctions IC 508 MB88501-253M

| Pin Nr.<br>Pin No.<br>Pin No. | Pin Name<br>Pin Name<br>Pin Nom | I/O | Funktion | Function | Fonction |
|---|---|---|---|---|---|
| 1 | 02 | O | Displaydatenausgang, Tastensignal | Display data, key scan output | Sortie des données de l'affichage, signal de touches |
| 2 | 03 | O | | | |
| 3 | 04 | O | Displaydatenausgang | Display data output | Sortie des données de l'affichage |
| 4 | CS | O | | | |
| 5 | DW/DR | O | Mechanik-Kontrollsignal Ausgang (508) | Mechanism control (IC508) signal output | Signal de contrôle mécanique – sortie (508) |
| 6 | A/D | O | | | |
| 7 | BEEP | O | Signalgeber (akustisch) Ausgangssignal | Buzzer drive signal output | Poste transmetteur des signaux (acoustique), signal de sortie |
| 8 | A MUTE | O | Stummschaltung Signalausgang | Audio muting signal output | Mise en veille – sortie de signal |
| 9 | RESET | O | Rücksetzsignalausgang Datendecoder | Reset signal output for display data decoder | Sortie de signal reset, décodeur des données |
| 10 | P3 | O | Einschaltsignal für Servo-Platte | Power switch signal for the servo circuit | Signal de mise en marche pour circuit servo |
| 11 | (NC) | | | | |
| 12 | R0 | I/O | | | |
| 13 | R1 | I/O | Mechanik-Kontrolladresse-, datenbus | Mechanism control (IC508) address/data bus | Adresse de contrôle mécanique, data bus |
| 14 | R2 | I/O | | | |
| 15 | R3 | I/O | | | |
| 16 | START | I | Automatische Strom- + Spannungskontrolle | ACC power voltage detect | Contrôle de courant + tension automatique |
| 17 | (NC) | | | | |
| 18 | VCC | | Versorgungsspannung | POWER supply pin | Tension d'alimentation |
| 19 | | | | | |
| 20 | ACK | I | Mechanik-Kontrollsignaleingang | Mechanism control (IC508) signal input | Entrée de signal de contrôle mécanique |
| 21 | SRQ | I | | | |
| 22 | COLOR CLK | O | Clocksignal für Display + Datendecoder | Clock signal for display data decoder | Signal CLOCK pour l'affichage + décodeur des données |
| 23 | R7 | | nicht angeschlossen | (Not used) | pas raccordé |
| 24 | RETURN | I | Return-Taste Signaleingang | Return key signal input | Touche RETURN, entrée de signal |
| 25 | R9 | I | Sensorsignaleingang für Mechanikkontrolle | Sensor signal input for loading mechanism | Entrée de signal sensor pour contrôle mécanique |
| 26 | R10 | I | | | |
| 27 | R11 | | nicht angeschlossen | (Not used) | pas raccordé |
| 28 | R12 | I | | | |
| 29 | R13 | I | Sensorsignaleingang für Mechanikkontrolle | Sensor signal input for loading mechanism | Entrée de signal sensor pour contrôle mécanique |
| 30 | (NC) | | | | |
| 31 | FSW | I | | | |
| 32 | K0 0 | I | | | |
| 33 | K1 1 | I | Tastenmatrix Signaleingang | Key matrix signal input | Matrice de touches, entrée de signal |
| 34 | K2 2 | I | | | |
| 35 | K3 3 | I | | | |
| 36 | EX | | Quarzoszillatoreingang für Clocksignal | Crystal osc pin for clock | Entrée d'oscillateur de quartz pour signal CLOCK |
| 37 | X | | | | |
| 38 | RESET | I/O | Rücksetzsignal | Reset pin | Signal RESET |
| 39 | IRQ | I | Fernbedienungseingangssignal | Remote signal input | Signal d'entrée de télécommande |
| 40 | — | | | | |
| 41 | (NC) | | | | |
| 42 | VSS | | Masse (–) | Ground terminal | Châssis (–) |
| 43 | — | | | | |
| 44 | SC/TO | O | | | |
| 45 | SI | I | nicht angeschlossen | (Not used) | pas raccordé |
| 46 | SO | O | | | |
| 47 | O0 | O | | | |
| 48 | O1 | O | Display Datenausgang | 7 segments data for display | Sortie des données de l'affichage |





## Funktionstabelle / Mechanism CPU / Tableau de fonctions IC 508 MB88501-274M

| Pin Nr.<br>Pin No.<br>Pin No. | Pin Name<br>Pin Name<br>Pin Nom | I/O | Funktion | Function | Fonction |
|---|---|---|---|---|---|
| 1 | O2 (T) | O | Displayausgangssignal | Output for "T" display | Signal de sortie – affichage |
| 2 | 03 (ALL) | O | Displayaussgangssignal | Output for "ALL" display | Signal de sortie – affichage |
| 3 | EXT OUT | O | Fernbedienungsausgangskontrolle Signalausgang | Remote output control signal output | Contrôle de sortie de télécommande, sortie de signal |
| 4 | DOOR PL | O | Türmagnetkontrollausgang | Door plunger control output | Sortie de contrôle de l'aimant du clapet |
| 5 | LD MT (F) | O | Lademotorkontrolle | Loading motor control (Forward rotation/ | Contrôle du moteur de charge |
| 6 | LD MT (R) | O | | reverse rotation) output | |
| 7 | APC | O | Laserdiode Ein/Aus Ausgang | Laser diode ON/OFF output | Diode laser mise en marche/arrêt – sortie |
| 8 | EMPHASIS | O | Ausgang für Deemphasis | Output for de-emphasis | Sortie pour déemphasis |
| 9 | D MUTE | O | Digitale Stummschaltung (Ausgang) | Digital muting output | Mise en veille digitale (sortie) |
| 10 | ATT | | nicht angeschlossen | (Not used) | pas raccordé |
| 11 | (NC) | | | | |
| 12 | CLK | O | Digitalsignalprozessor IC 502 + servo (IC504) Clocksignal | Digital signal processing IC (IC502)/servo IC (IC504) clock signal | Procésseur de signal digital IC 502 + servo (IC 504) signal CLOCK |
| 13 | D CONT | O | Kontrollsignalausgang für servo IC 504 | Control signal output for servo IC (IC504) | Sortie de signal de contrôle pour servo IC 504 |
| 14 | LATCH | O | DATA LATCH | DATA latch transmission | DATA LATCH |
| 15 | DATA | O | Serieller Datenausgang | DATA (serial) output | Sortie des données sérielle |
| 16 | STBY | I | Stand-by Signalausgang | STBY signal input | Sortie de signal stand-by |
| 17 | (NC) | | | | |
| 18 | VCC | | Versorgungsspannung | Power supply pin | Tension d'alimentation |
| 19 | (NC) | | | | |
| 20 | AD0 | I/O | | | |
| 21 | AD1 | I/O | Master control IC 801 Adresse + Datenbus | Master control (IC801) address/data bus | Master control IC 801 adresse + databus |
| 22 | AD2 | I/O | | | |
| 23 | AD3 | I/O | | | |
| 24 | A/D | I | Master control IC Signaleingang | Master control (IC801) signal input | Master control IC 801 entrée de signal |
| 25 | DR/W | I | | | |
| 26 | SLED LMT | I | auf Masse geschaltet | Sled limit signal input | commuté sur châssis |
| 27 | DISC LD | I | | (Connected to ground) | |
| 28 | ACK | O | Master control IC 801 Signaleingang | Master control (IC801) signal output | Master control IC 801 sortie de signal |
| 29 | SRQI | O | | | |
| 30 | (NC) | | | | |
| 31 | DFCT | I | gedehnter Detektoreingang | Scratched disc detect input | Entrée détecteur de disque |
| 32 | CS | I | Master control IC 801 Signaleingang | Master control (IC801) signal input | Master control IC 801 entrée de signal |
| 33 | SENSE | I | SENSE Signaleingang | SENSE signal input | SENSE entrée de signal |
| 34 | F OK | I | Fokussierung o. k. Signaleingang | FOK signal input | Focalisation OK entrée de signal |
| 35 | GFS | I | Getaktete Fokus + sled-Signaleingang | GFS signal input | GFS entrée de signal |
| 36 | EX | I | Clocksignaleingang | Clock signal input | Entrée de signal CLOCK |
| 37 | X | O | nicht angeschlossen | (Not used) | pas raccordé |
| 38 | RESET | I/O | Rücksetzung | Reset pin | Reset |
| 39 | SYNC | I | Synchronisationssignal (SCOR) Eingang | SCOR signal input | Signal de synchronisation (SCOR) entrée |
| 40 | DFCK | | nicht angeschlossen | (Not used) | pas raccordé |
| 41 | (NC) | | | | |
| 42 | VSS | | Masseanschluß | Ground pin | Raccordement de châssis |
| 43 | XC | | nicht angeschlossen | (Not used) | pas raccordé |
| 44 | WFCK | I | Signalclockeingang (Zeitbasis + Mechanikkontrolle) | WFCK signal input (Time base of mechanism control) | Entrée de signal CLOCK (base de temps + contrôle mécanique) |
| 45 | SUB Q | I | SUBQ Signaleingang | SUB Q signal input | SUBQ entrée de signal |
| 46 | SD | | nicht angeschlossen | (Not used) | pas raccordé |
| 47 | O0 (PLAY) | O | Ausgang für Display „Play" | Output for "PLAY" display | Sortie pour display «Play» |
| 48 | O1 (PAUSE) | O | Ausgang für Display „Pause" | Output for "PAUSE" display | Sortie pour display «Pause» |

| | | | | | |
|---|---|---|---|---|---|
| 43 | — | | | | |
| 44 | SC/TO | O | | | |
| 45 | SI | I | nicht angeschlossen | (Not used) | pas raccordé |
| 46 | SO | O | | | |
| 47 | O0 | O | | | |
| 48 | O1 | O | Display Datenausgang | 7 segments data for display | Sortie des données de l'affichage |



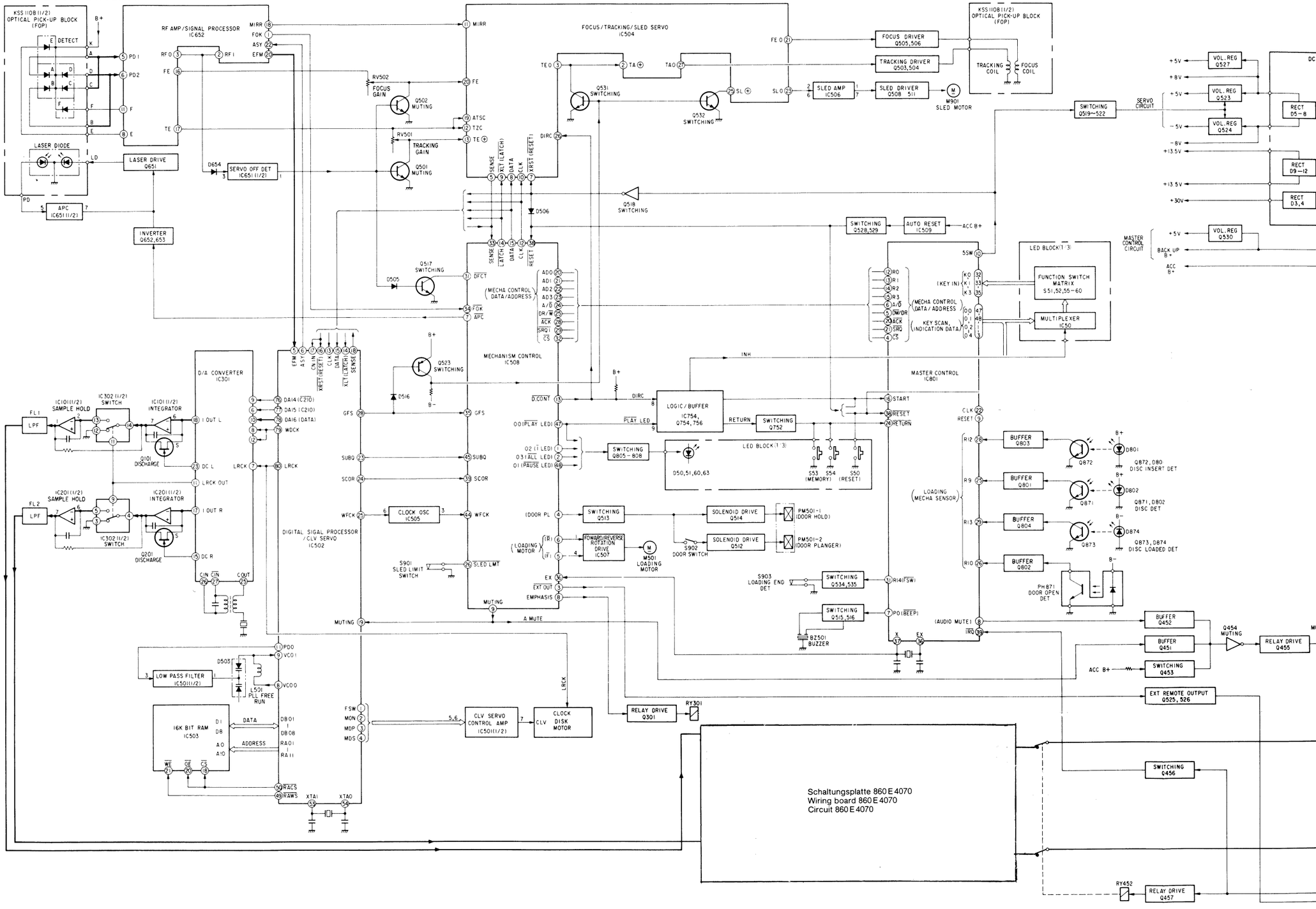


## Funktionstabelle / Mechanism CPU / Tableau de fonctions IC 508 MB88501-274M

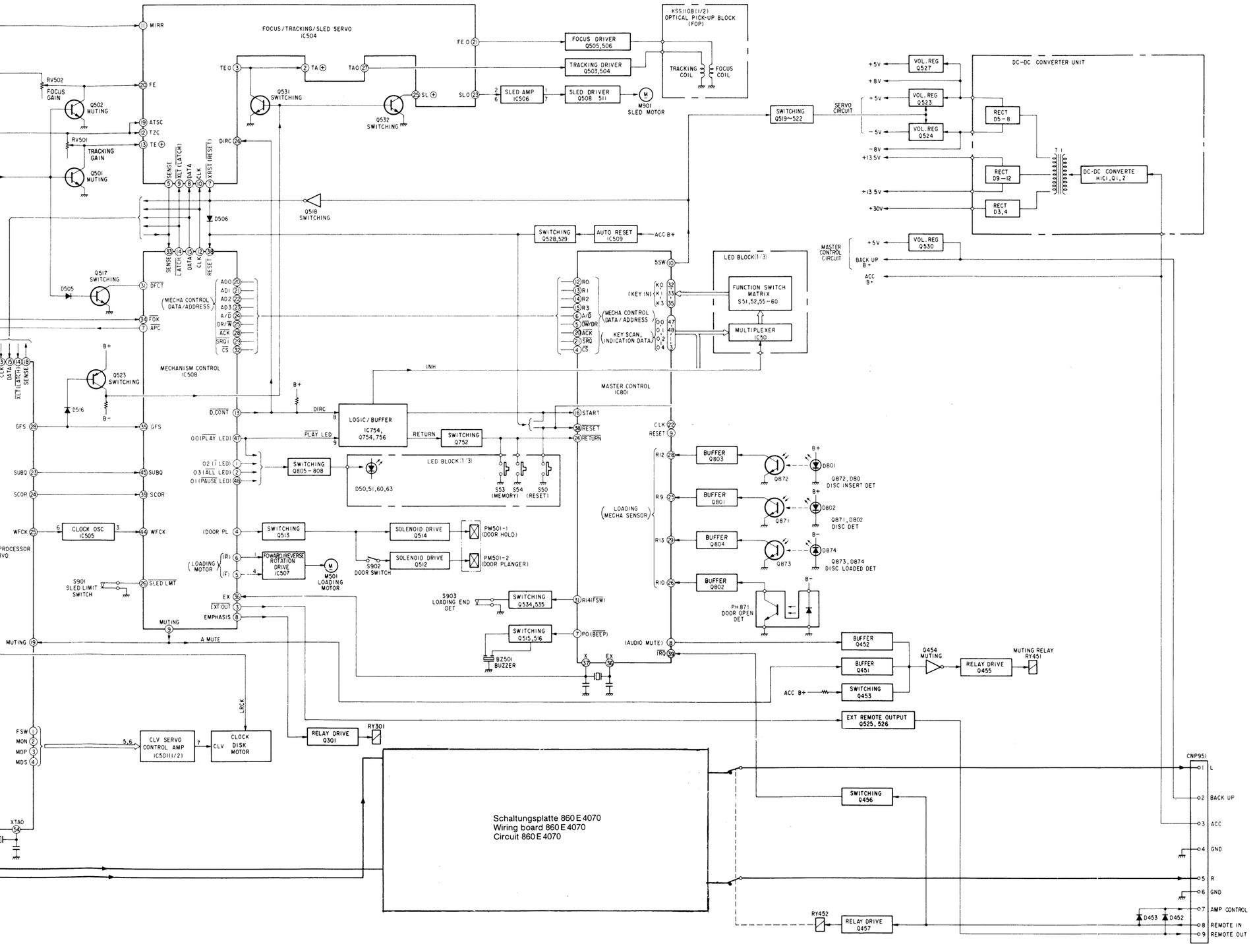
| Pin Nr.<br>Pin No.<br>Pin No. | Pin Name<br>Pin Name<br>Pin Nom | I/O | Funktion | Function | Fonction |
|---|---|---|---|---|---|
| 1 | O2 (T) | O | Displayausgangssignal | Output for "T" display | Signal de sortie – affichage |
| 2 | 03 (ALL) | O | Displayaussgangssignal | Output for "ALL" display | Signal de sortie – affichage |
| 3 | EXT OUT | O | Fernbedienungsausgangskontrolle Signalausgang | Remote output control signal output | Contrôle de sortie de télécommande, sortie de signal |
| 4 | DOOR PL | O | Türmagnetkontrollausgang | Door plunger control output | Sortie de contrôle de l'aimant du clapet |
| 5 | LD MT (F) | O | Lademotorkontrolle | Loading motor control (Forward rotation/ | Contrôle du moteur de charge |
| 6 | LD MT (R) | O | | reverse rotation) output | |
| 7 | APC | O | Laserdiode Ein/Aus Ausgang | Laser diode ON/OFF output | Diode laser mise en marche/arrêt – sortie |
| 8 | EMPHASIS | O | Ausgang für Deemphasis | Output for de-emphasis | Sortie pour déemphasis |
| 9 | D MUTE | O | Digitale Stummschaltung (Ausgang) | Digital muting output | Mise en veille digitale (sortie) |
| 10 | ATT | | nicht angeschlossen | (Not used) | pas raccordé |
| 11 | (NC) | | | | |
| 12 | CLK | O | Digitalsignalprozessor IC 502 + servo (IC504) Clocksignal | Digital signal processing IC (IC502)/servo IC (IC504) clock signal | Procésseur de signal digital IC 502 + servo (IC 504) signal CLOCK |
| 13 | D CONT | O | Kontrollsignalausgang für servo IC 504 | Control signal output for servo IC (IC504) | Sortie de signal de contrôle pour servo IC 504 |
| 14 | LATCH | O | DATA LATCH | DATA latch transmission | DATA LATCH |
| 15 | DATA | O | Serieller Datenausgang | DATA (serial) output | Sortie des données sérielle |
| 16 | STBY | I | Stand-by Signalausgang | STBY signal input | Sortie de signal stand-by |
| 17 | (NC) | | | | |
| 18 | VCC | | Versorgungsspannung | Power supply pin | Tension d'alimentation |
| 19 | (NC) | | | | |
| 20 | AD0 | I/O | | | |
| 21 | AD1 | I/O | | | |
| 22 | AD2 | I/O | Master control IC 801 Adresse + Datenbus | Master control (IC801) address/data bus | Master control IC 801 adresse + databus |
| 23 | AD3 | I/O | | | |
| 24 | A/D | I | | | |
| 25 | DR/W | I | Master control IC Signaleingang | Master control (IC801) signal input | Master control IC 801 entrée de signal |
| 26 | SLED LMT | I | | Sled limit signal input | |
| 27 | DISC LD | I | auf Masse geschaltet | (Connected to ground) | commuté sur châssis |
| 28 | ACK | O | | | |
| 29 | SRQI | O | Master control IC 801 Signaleingang | Master control (IC801) signal output | Master control IC 801 sortie de signal |
| 30 | (NC) | | | | |
| 31 | DFCT | I | gedehnter Detektoreingang | Scratched disc detect input | Entrée détecteur de disque |
| 32 | CS | I | Master control IC 801 Signaleingang | Master control (IC801) signal input | Master control IC 801 entrée de signal |
| 33 | SENSE | I | SENSE Signaleingang | SENSE signal input | SENSE entrée de signal |
| 34 | F OK | I | Fokussierung o. k. Signaleingang | FOK signal input | Focalisation OK entrée de signal |
| 35 | GFS | I | Getaktete Fokus + sled-Signaleingang | GFS signal input | GFS entrée de signal |
| 36 | EX | I | Clocksignaleingang | Clock signal input | Entrée de signal CLOCK |
| 37 | X | O | nicht angeschlossen | (Not used) | pas raccordé |
| 38 | RESET | I/O | Rücksetzung | Reset pin | Reset |
| 39 | SYNC | I | Synchronisationssignal (SCOR) Eingang | SCOR signal input | Signal de synchronisation (SCOR) entrée |
| 40 | DFCK | | nicht angeschlossen | (Not used) | pas raccordé |
| 41 | (NC) | | | | |
| 42 | VSS | | Masseanschluß | Ground pin | Raccordement de châssis |
| 43 | XC | | nicht angeschlossen | (Not used) | pas raccordé |
| 44 | WFCK | I | Signalclockeingang (Zeitbasis + Mechanikkontrolle) | WFCK signal input (Time base of mechanism control) | Entrée de signal CLOCK (base de temps + contrôle mécanique) |
| 45 | SUB Q | I | SUBQ Signaleingang | SUB Q signal input | SUBQ entrée de signal |
| 46 | SD | | nicht angeschlossen | (Not used) | pas raccordé |
| 47 | O0 (PLAY) | O | Ausgang für Display „Play" | Output for "PLAY" display | Sortie pour display «Play» |
| 48 | O1 (PAUSE) | O | Ausgang für Display „Pause" | Output for "PAUSE" display | Sortie pour display «Pause» |

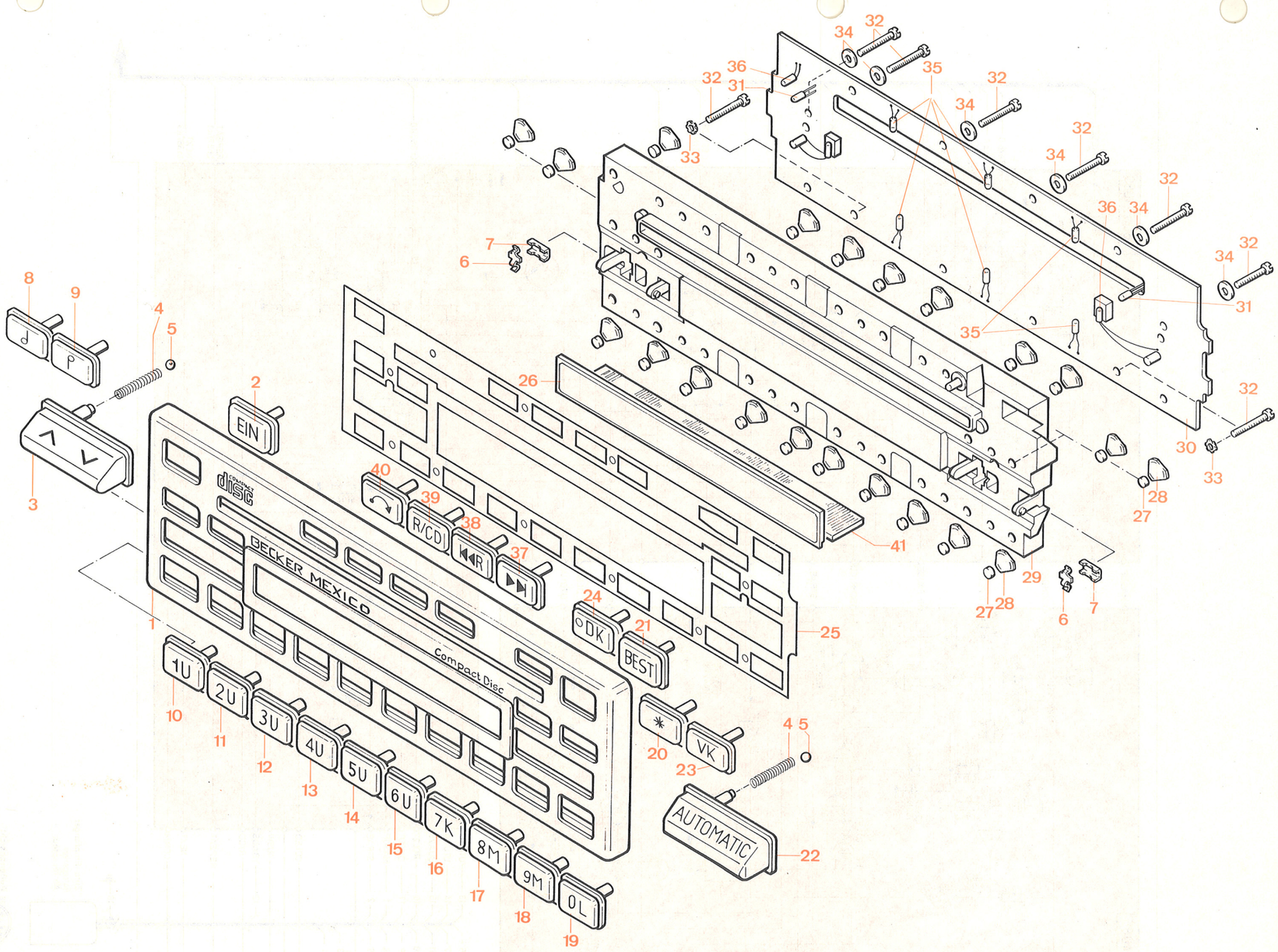
**Für Notizen**
**For notes**
**Pour notes**

## 1-1. BLOCK DIAGRAM



**Section 1 Output** **Secteur 1 Sortie**



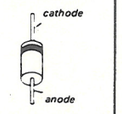



## Ersatzteile-Liste – Spare Parts List – Liste des pièces de rechange

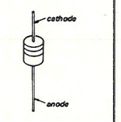
| Lfd. Nr. Item. No. Pos. No. | Benennung | Denomination | Dénomination | Pos. i. Schaltb. Diagram pos. Pos. dans le schéma | Artikel-Nr. Article No. No. d'article | Best.-Nr. Part. No. No. de commande |
|---|---|---|---|---|---|---|
| | **Bedienaufsatz** | **Front panel** | **Garniture de commande** | | | 539.538–257 |
| 1 | Aufsatz | Panel | Garniture | | | 539.546–257 |
| 2 | Tastenknopf „Ein“ | Pushbutton „Ein“ (ON) | Bouton de touche „Ein“ (mise en marche) | | | 555.533–251 |
| 3 | Wipptaste | Toggle switch | Touche basculante | | | 475.701–251 |
| 4 | dazu Druckfeder | Pressure spring for above | avec ressort de pression | | | 475.270–245 |
| 5 | dazu Stahlkugel | Steel ball for above | avec bille d'acier | | | 171.077–230 |
| 6 | Kontaktfeder | Contact spring | Ressort de contact | | | 475.289–278 |
| 7 | Kontaktlager | Contact bearing | Palier de contact | | | 475.319–278 |
| 8/9 | Tastenknopf Klangsteller | Pushbutton tone control | Bouton de touche – contrôle de tonalité | | | 539.661–251 |
| 8a/9a | dazu beschriebene Plakette ♩♪ | Label for above ♩♪ | avec plaquette ♩♪ | | | 539.678–258 |
| 10 | Tastenknopf–1U | Pushbutton–1U | Bouton de touche–1U | | | 510.645–251 |
| 11 | Tastenknopf–2U | Pushbutton–2U | Bouton de touche–2U | | | 510.653–251 |
| 12 | Tastenknopf–3U | Pushbutton–3U | Bouton de touche–3U | | | 510.661–251 |
| 13 | Tastenknopf–4U | Pushbutton–4U | Bouton de touche–4U | | | 510.671–251 |
| 14 | Tastenknopf–5U | Pushbutton–5U | Bouton de touche–5U | | | 510.688–251 |
| 15 | Tastenknopf–6U | Pushbutton–6U | Bouton de touche–6U | | | 510.696–251 |
| 16 | Tastenknopf–7K | Pushbutton–7K | Bouton de touche–7K | | | 510.701–251 |
| 17 | Tastenknopf–8M | Pushbutton–8M | Bouton de touche–8M | | | 510.718–251 |
| 18 | Tastenknopf–9M | Pushbutton–9M | Bouton de touche–9M | | | 510.726–251 |
| 19 | Tastenknopf–OL | Pushbutton–OL | Bouton de touche–OL | | | 510.734–251 |
| 20 | Tastenknopf-Funktionstaste | Pushbutton–Function control button | Bouton de touche–touche de fonction | | | 539.686–251 |
| 21 | Tastenknopf–BEST | Pushbutton–BEST | Bouton de touche–BEST | | | 555.118–251 |
| 22 | Wipptaste „Automatic“ | Toggle switch „Automatic“ | Touche basculante „Automatic“ | | | 475.262–251 |
| 23 | Tastenknopf VK | Pushbutton VK (traffic radio) | Bouton de touche VK (informations routières) | | | 539.708–251 |
| 24 | Tastenknopf DK | Pushbutton DK (information code) | Bouton de touche DK (code d'informations) | | | 539.724–251 |
| 25 | Abdeckung | Cover | Couvercle | | | 568.236–284 |
| 26 | LCD-Anzeige kpl. | LCD display cpl. | Affichage LCD cpl. | | | 531.464–392 |
| 27 | Federelement | Spring element | Elément ressort | | | 475.300-246 |
| 28 | Kontaktscheibe | Contact washer | Plaque de contact | | | 475.327–278 |
| 29 | Lichtleiter kpl. | Light conductor cpl. | Conducteur de lumière cpl. | | | 555.053–254 |
| 29a | Lichtleiter | Light conductor | Conducteur de lumière | | | 555.045–254 |
| 29b | Abdeckung | Cover | Couvercle | | | 555.282–284 |
| 29c | Aufnahme, Dioden | Diode cap | Culot de diodes | | | 555.290–227 |
| 29d | Abschirmhülse | Cover bush | Cosse | | | 555.304–283 |
| 30 | Schaltungsplatte-Aufsatz | Wiring board–panel | Circuit–garniture | | | 558.648–373 |
| 31 | Leuchtdiode | Light diode | Diode de lumière | | | 564.494–304 |
| 32 | Schraube | Screw | Vis | M2x14 DIN84–5,8–A2E | | 447.544–203 |
| 33 | Sicherungsscheibe | Safety disc | Disque de sécurité | A2,5 DIN6797–St–A2E | | 340.340–213 |
| 34 | Unterlagscheibe Teflon | Washer Teflon | Rondelle Teflon | 5,9x2x0,19 | | 266.256–217 |
| 35 | Lampe | Lamp | Lampe | TI, 12V/0,02A ALT A–870–1 | | 292.141–392 |
| 36 | Glühlampe gewinkelt | Hot-cathode lamp, angled | Lampe à incandescente, anglée | 12V/0,035A | | 475.221–392 |
| 37 | Tastenknopf kpl. ▷▷\| | Pushbutton cpl. ▷▷\| | Bouton de touche cpl. ▷▷\| | | | 539.643–251 |
| 38 | Tastenknopf kpl. \|◁◁ R | Pushbutton cpl. \|◁◁ R | Bouton de touche cpl. \|◁◁ R | | | 539.627–251 |
| 39 | Tastenknopf R/CD kpl. | Pushbutton R/CD cpl. | Bouton de touche R/CD cpl. | | | 539.597–251 |
| 40 | Tastenknopf kpl. ⤳ | Pushbutton cpl. ⤳ | Bouton de touche cpl. ⤳ | | | 539.562–251 |
| 41 | Kontaktgummi | Contact washer | Rondelle de contact | | | 510.191–278 |

## Semiconductor lead layouts

**10E2**
**1S1585**
**1SS83**
**1SS106**
**ERA84-009**
**ERB84-009**
**HZ2ALL**
**HZ5CLL**
**HZ6BIL**
**RD10EL3**




**1SS119**

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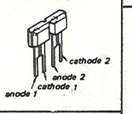
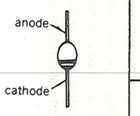



**V0-6C**

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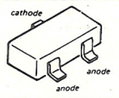
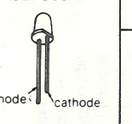



**SLP935A**

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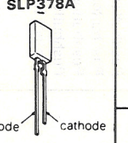
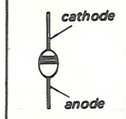
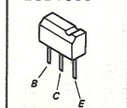



**U05G**




**2SB822**
**2SD1055**

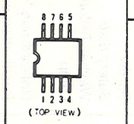



**2SA1385**
**2SD1077L**

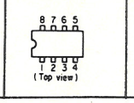
**2SD1012-F2**
**2SC2603-F**
**DTC124ES**
**DTA124ES**
**DTC114ES**

**2SA1175**
**2SA1175-F**
**2SB811**
**2SC2785**
**2SC2785-E**

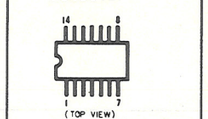
**MB3763PF**
**NJM082M**
**NJM4560M**
**μPC4558G2**




**NE5532P**
**MB3761**




**TC4001BF**

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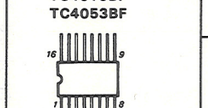
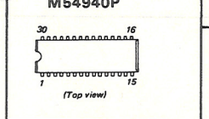
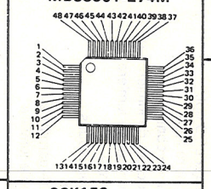
**TC4053BF**



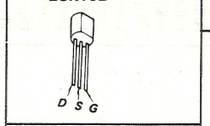

**M54940P**



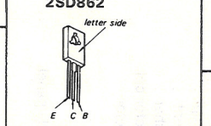

**MB88501-253M**
**MB88501-274M**



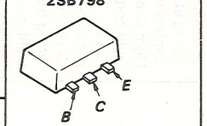

**2SK152**




**2SB731**
**2SD809**
**2SD862**




**2SB798**

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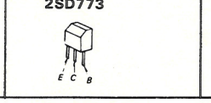
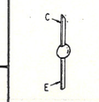
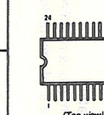



**2SA812**
**2SC1623**
**2SC2712-G**
**DTA144EK**
**DTA124EK**
**DTA124XK**
**DTC124EK**

**PH102**




**CX20109**
**MSM5128-20GS**

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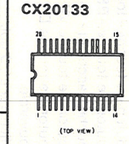
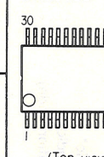
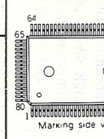
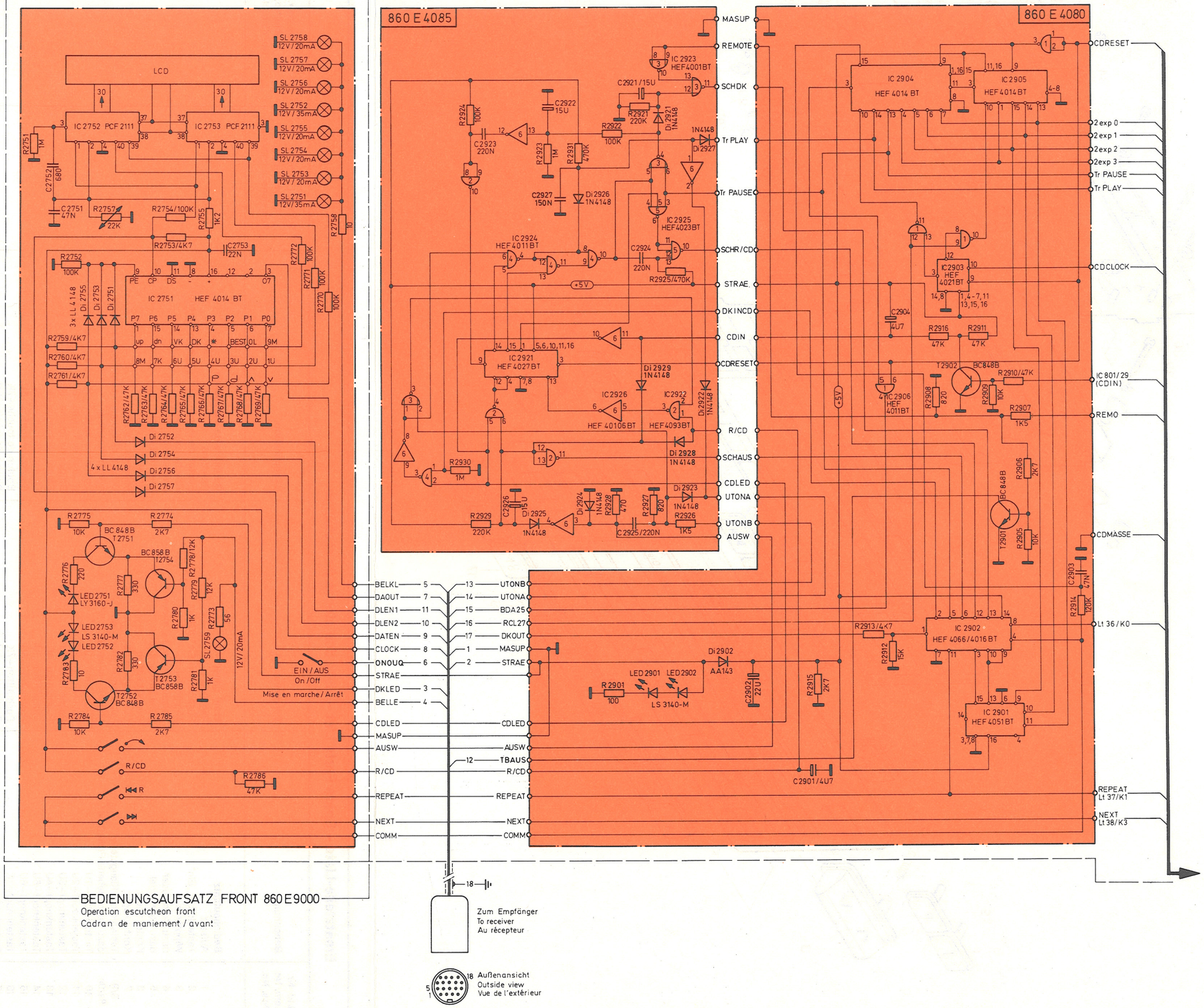



**CX20108**




**CX23035**



(OPTICAL PICK-UP BLOCK)(FOP)
KSS-110B(1/2)

【RF AMP BOARD】

【MAIN BOARD】

IC652 CX20109
RF AMP/SIGNAL PROCESSOR

IC501 NJM082M
VCO

IC502 CX23035
DIGITAL SIGNAL PROCESSOR/CLV SERVO

D515 ISS106 D503 KV1236Z

D651,652,654 ISS106

IC651 NJM4558M
SERVO OFF DET

D653 HZ2ALL

IC651 NJM4558M
APC

D504 HZ5CLL

IC504 CX20108
FOCUS/TRACKING/SLED SERVO

IC501 NJM082M
CLV SERVO CONTROL AMP

D516 IT40

Q533 2SA1175
SWITCHING

D501,502 HZ2BLL

Q506 2SB822
FOCUS DRIVER

Q505 2SD1055
FOCUS DRIVER

Q503 2SB822
TRACKING DRIVER

Q504 2SD1055
TRACKING DRIVER

Q651 2SB798
LASER DRIVE

Q652 DTA124EK
INVERTER

Q653 DTC124EK
INVERTER

IC652 CX20109
TRACKING SERVO AMP

IC506 NJM4558M
SLED AMP

Q509,511 2SD1055, Q508,510 2SB822
SLED DRIVER

Q532 2SD1020
SWITCHING

Q531 2SD1020
SWITCHING

D505 IT40

Q501,502 2SD1020
MUTING

Q518 DTC124ES
SWITCHING

Q517 2SC2785E
SWITCHING

IC508 MB8850I-299M
MECHANISM CONTROL

IC505 TC4001BF
CLOCK OSC

Q513 2SB808
SWITCHING

IC507 MB3763PF
PWM DRIVE

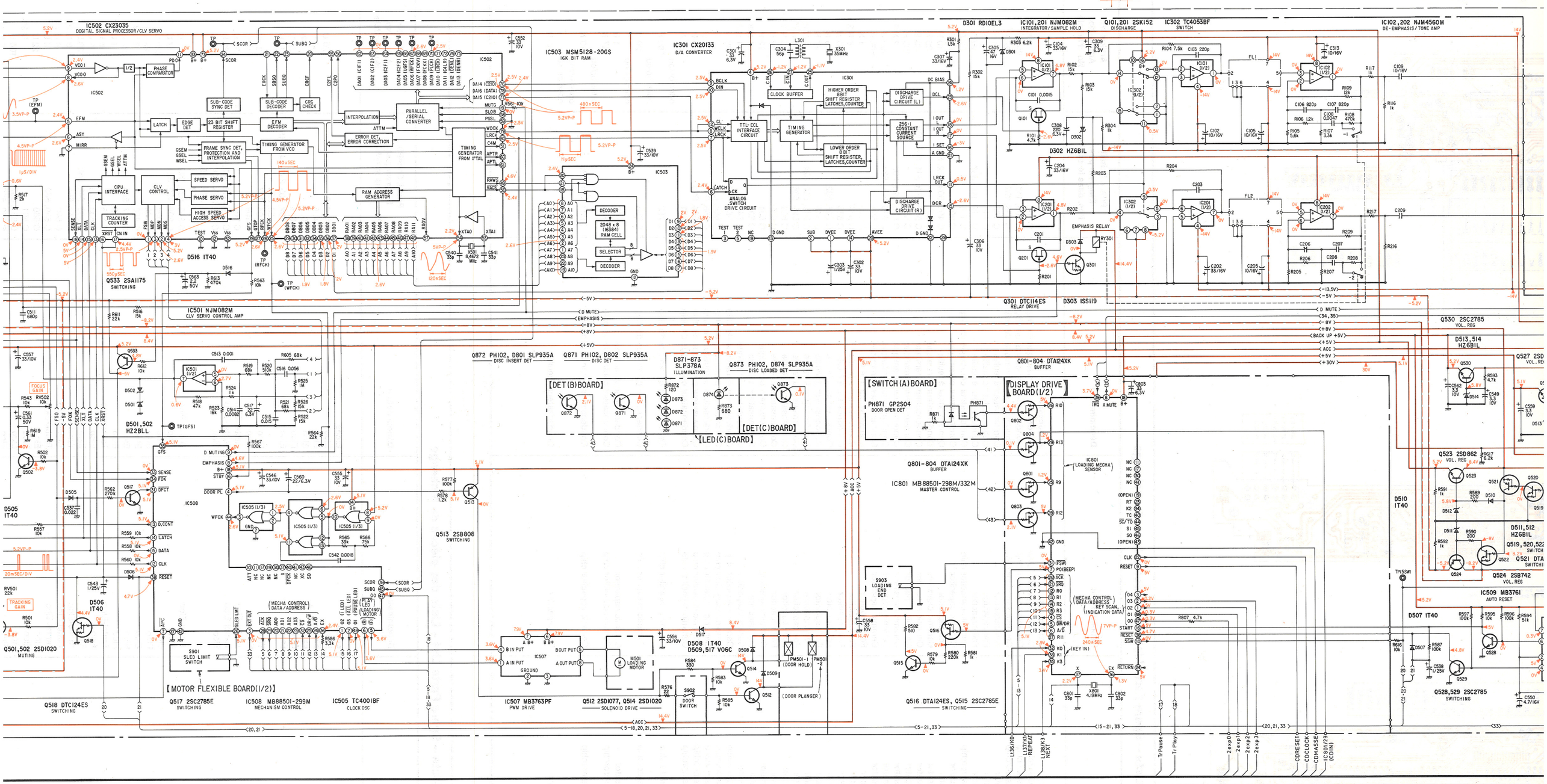
Q872 PH102, D801 SLP935
DISC INSERT DET

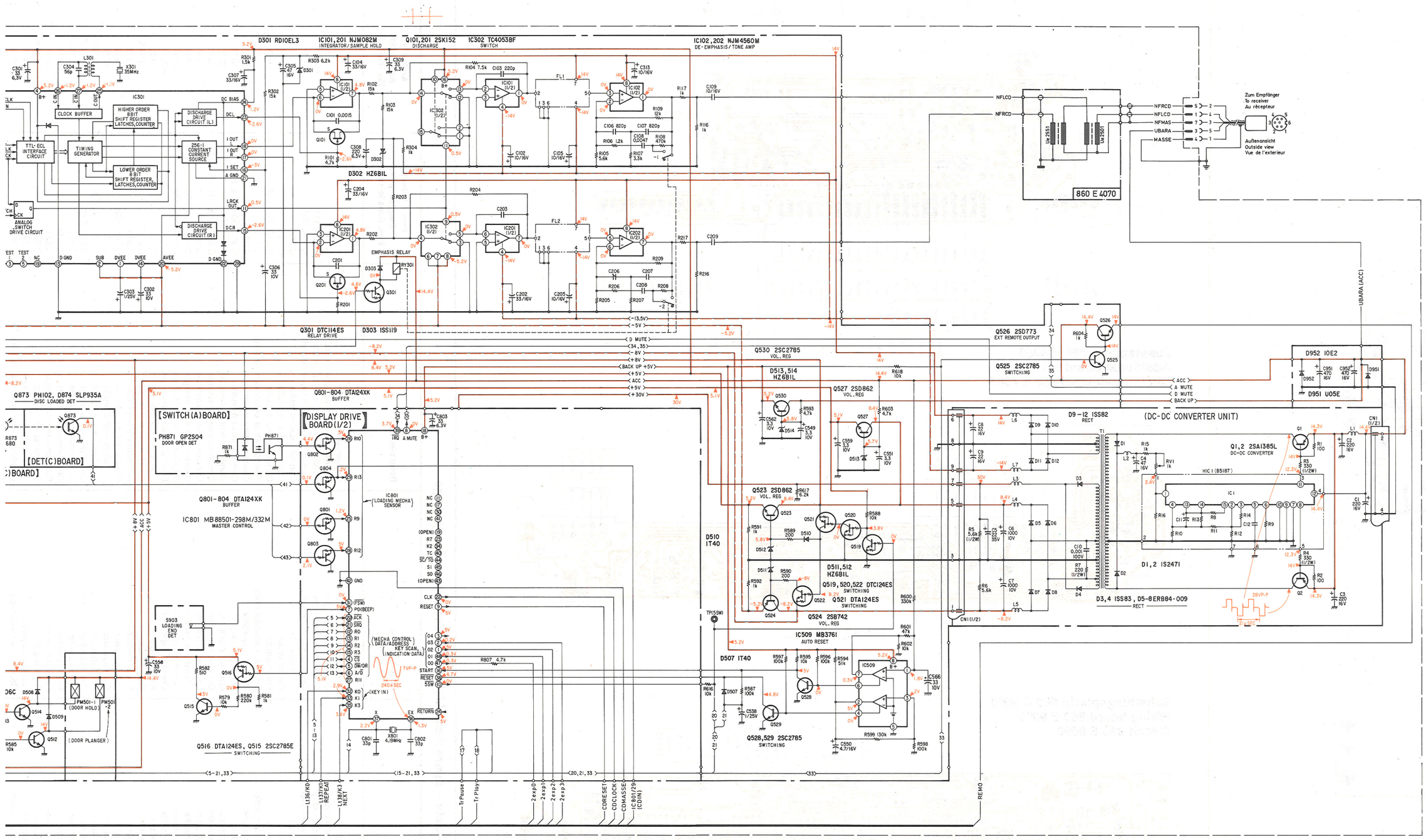
【MOTOR FLEXIBLE BOARD(1/2)】

【MOTOR FLEXIBLE BOARD(1/2)】

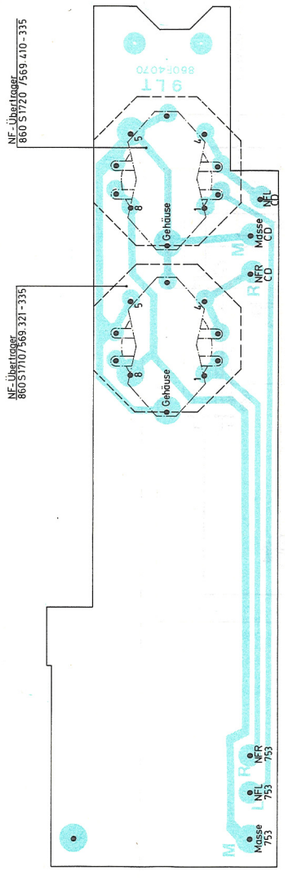
S901
SLED LIMIT SWITCH

(DISC MOTOR)
(BHR-3000A)

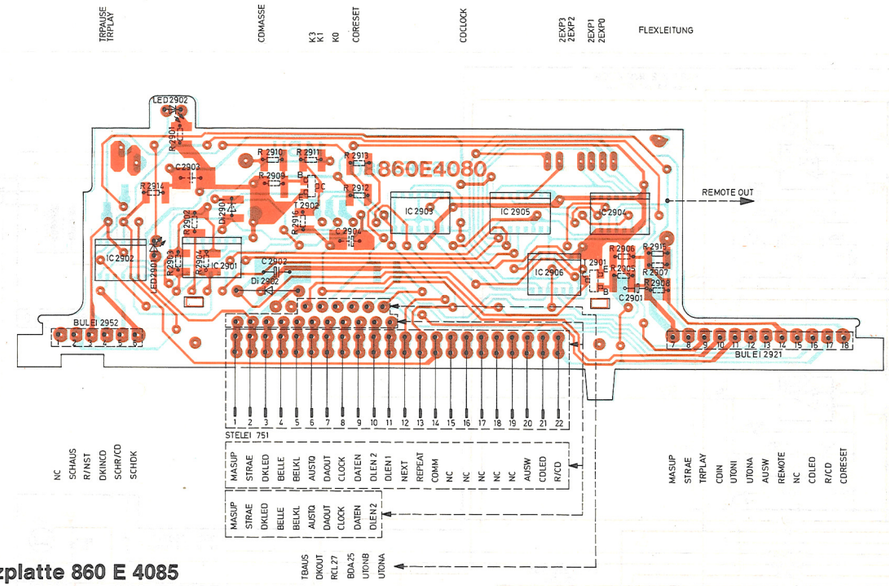

IC502 CX23035
DEGITAL SIGNAL PROCESSOR/CLV SERVO
IC503 MSM5128-20GS
16K BIT RAM
IC301 CX20133
D/A CONVERTER
D301 RD10EL3
IC101,201 NJM082M
INTEGRATOR/SAMPLE HOLD
Q101,201 2SK152
DISCHARGE
IC302 TC4053BF
SWITCH
IC102,202 NJM4560M
DE-EMPHASIS/TONE AMP
D302 HZ6BIL
Q301 DTC114ES
RELAY DRIVE
D303 ISS119
IC501 NJM082M
CLV SERVO CONTROL AMP
D516 IT40
Q533 2SA1175
SWITCHING
D501,502 HZ28LL
Q501,502 2SD1020
MUTING
D505 IT40
D506 IT40
Q518 DTC124ES
SWITCHING
Q517 2SC2785
SWITCHING
IC508 MB88501-299M
MECHANISM CONTROL
IC505 TC4001BF
CLOCK OSC
Q513 2SB808
SWITCHING
Q872 PH102, D801 SLP935A
DISC INSERT DET
Q871 PH102, D802 SLP935A
DISC DET
Q873 PH102, D874 SLP935A
DISC LOADED DET
D871-873 SLP378A
ILLUMINATION
[DET(B)BOARD]
[LED(C)BOARD]
[DET(C)BOARD]
[SWITCH(A)BOARD]
PH871 GP2S04
DOOR OPEN DET
[DISPLAY DRIVE BOARD(I/2)]
Q801-804 DTA124XK
BUFFER
IC801 MB88501-298M/332M
MASTER CONTROL
S903 LOADING END DET
Q516 DTA124ES, Q515 2SC2785
SWITCHING
[MOTOR FLEXIBLE BOARD(I/2)]
S901 SLED LIMIT SWITCH
IC507 MB3763PF
PWM DRIVE
Q512 2SD1077, Q514 2SD1020
SOLENOID DRIVE
D508 IT40
D509,517 V06C
S902 DOOR SWITCH
(DOOR PLANGER)
(DOOR HOLD)
Q530 2SC2785
VOL. REG
D513,514 HZ6BIL
Q523 2SD862
VOL. REG
Q524 2SB742
VOL. REG
D510 IT40
D511,512 HZ6BIL
Q519,520,522
SWITCH
Q521 DTA
SWITCH
IC509 MB3761
AUTO RESET
D507 IT40
Q528,529 2SC2785
SWITCHING
Q527 2SD
VOL. REG
(MECHA CONTROL) DATA/ADDRESS
(MECHA CONTROL) DATA/ADDRESS KEY SCAN, INDICATION DATA
(KEY IN)
(LOADING MECHA SENSOR)
(PLAY LED) (PAUSE LED)
(LOADING MOTOR)
L136/K0
L137/K1 REPEAT
L138/K3 NEXT
Tr Pause
Tr Play
2exp0
2exp1
2exp2
2exp3
CDRESET
CDCLOCK
CDMASSE
IC801/29 (CDIN)


D301 RD10EL3
IC101,201 NJM082M
INTEGRATOR/SAMPLE HOLD
Q101,201 2SK152
DISCHARGE
IC302 TC4053BF
SWITCH
IC102,202 NJM4560M
DE-EMPHASIS/TONE AMP
IC301
CLOCK BUFFER
HIGHER ORDER 8BIT SHIFT REGISTER LATCHES,COUNTER
LOWER ORDER 8 BIT SHIFT REGISTER, LATCHES,COUNTER
TTL-ECL INTERFACE CIRCUIT
TIMING GENERATOR
256:1 CONSTANT CURRENT SOURCE
ANALOG SWITCH DRIVE CIRCUIT
DISCHARGE DRIVE CIRCUIT (L)
DISCHARGE DRIVE CIRCUIT (R)
DC BIAS
DCL
I OUT L
I OUT R
I SET
A GND
LRCK OUT
DCR
D GND
D302 HZ6B1L
EMPHASIS RELAY
RY301
Q301 DTC114ES
RELAY DRIVE
D303 1SS119
FL1
FL2
NFLCD
NFRCD
860 E 4070
Zum Empfänger
To receiver
Au récepteur
Außenansicht
Outside view
Vue de l'extérieur
NFMAS
UBARA
MASSE
UBARA (ACC)
Q526 2SD773
EXT REMOTE OUTPUT
Q525 2SC2785
SWITCHING
D952 10E2
D951 U05E
Q530 2SC2785
VOL. REG
D513,514 HZ6B1L
Q527 2SD862
VOL. REG
Q523 2SD862
VOL. REG
D510 IT40
Q519,520,522 DTC124ES
SWITCHING
Q521 DTA124ES
SWITCHING
D511,512 HZ6B1L
Q524 2SB742
VOL. REG
IC509 MB3761
AUTO RESET
Q528,529 2SC2785
SWITCHING
D507 IT40
D9-12 ISS82
RECT
(DC-DC CONVERTER UNIT)
Q1,2 2SA1385L
DC-DC CONVERTER
HIC 1 (B5187)
D1,2 IS247J
D3,4 ISS83, D5-8ERB84-009
RECT
D873 PH102, D874 SLP935A
DISC LOADED DET
[SWITCH(A)BOARD]
PH871 GP2S04
DOOR OPEN DET
[DISPLAY DRIVE BOARD(1/2)]
Q801-804 DTA124XK
BUFFER
IC801 MB88501-298M/332M
MASTER CONTROL
IC801 (LOADING MECHA SENSOR)
S903 LOADING END DET
Q516 DTA124ES, Q515 2SC2785E
SWITCHING
PM501-1 (DOOR HOLD)
PM501-2 (DOOR PLANGER)
[DET(C)BOARD]
(MECHA CONTROL / DATA/ADDRESS / KEY SCAN, INDICATION DATA)
(KEY IN)
X801 4.19MHz
D MUTE
BACK UP +5V
ACC
BACK UP
A MUTE
REMO
CORESET
CDCLOCK
CDMASSE
IC801/29 (CDIN)
Tr.Pause
Tr.Play
Schaltplan 860.902- Blätter 6 / Blatt 2

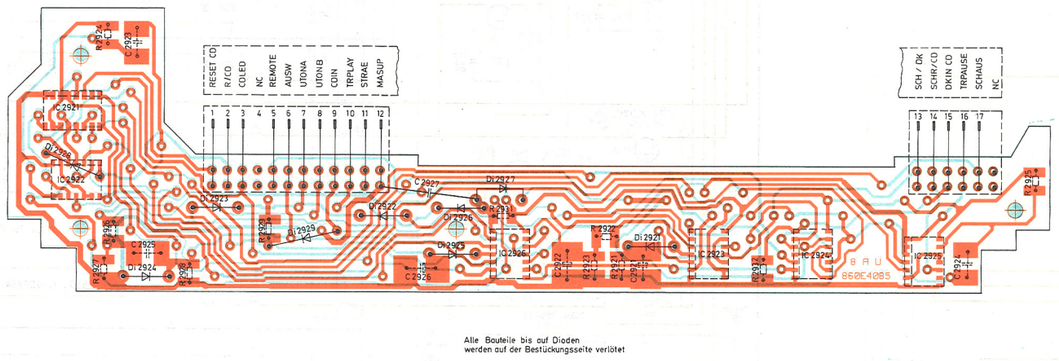
## NF-Schaltungsplatte 860 E 4070
## AF-PC-Board 860 E 4070
## Circuit BF 860 E 4070




## Verbindungsplatte 860 E 4080
## Connection board 860 E 4080
## Circuit de connection 860 E 4080

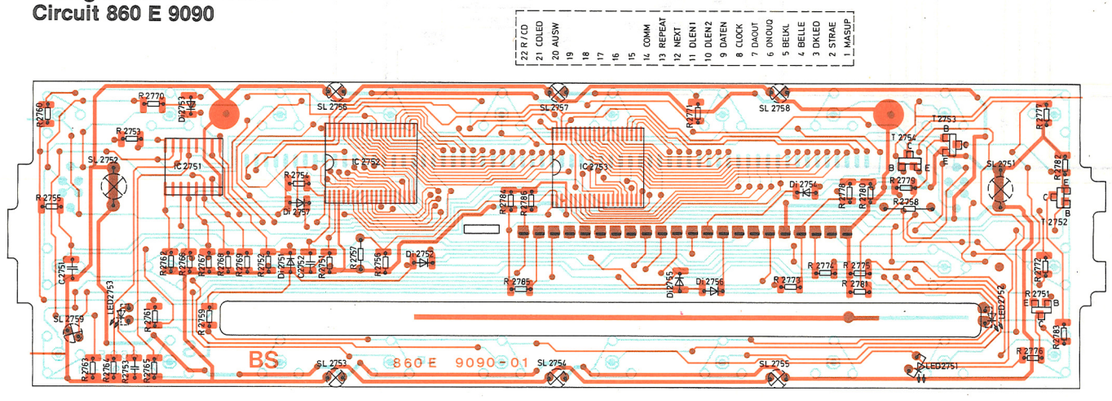



## Zusatzplatte 860 E 4085
## Additional board 860 E 4085
## Circuit additionel 860 E 4085




Alle Bauteile bis auf Dioden
werden auf der Bestückungsseite verlötet

## Schaltungsplatte 860 E 9090
## Wiring board 860 E 9090
## Circuit 860 E 9090



## Ersatzteile-Liste – Spare Parts List – Liste des pièces de rechange

| Lfd. Nr. Item. No. Pos. No. | Benennung | Denomination | Dénomination | Pos. i. Schaltb. Diagram pos. Pos. dans le schéma | Artikel-Nr. Article No. No. d'article | Best.-Nr. Part. No. No. de commande |
|---|---|---|---|---|---|---|
| | **Kondensatoren** | **Capacitors** | **Condensateurs** | | | |
| 1 | Keramikkondensatorchip | Ceramic capacitor chip | Condensateur céramique de chip | C 101 | 1 N 5 | 596.205–315 |
| 2 | Keramikkondensatorchip | Ceramic capacitor chip | Condensateur céramique de chip | C 103, 111 | 220 P | 596.183–315 |
| 3 | Keramikkondensatorchip | Ceramic capacitor chip | Condensateur céramique de chip | C 106, 107 | 820 P | 596.191–315 |
| 4 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 108 | 4 N 7 | 595.918–314 |
| 5 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 110 | 2 N 2 | 595.901–314 |
| 6 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 112, 113, 537 | 22 N | 595.926–314 |
| 7 | Keramikkondensatorchip | Ceramic capacitor chip | Condensateur céramique de chip | C 114 | 82 P | 596.175–315 |
| 8 | Keramikkondensator | Ceramic capacitor | Condensateur céramique | C 304 | 56 P | 595.543–315 |
| 9 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 403, 509, 512, 527 | 10 N | 596.061–314 |
| 10 | Keramikkondensator | Ceramic capacitor | Condensateur céramique | C 502 | 39 P | 595.561–315 |
| 11 | Keramikkondensator | Ceramic capacitor | Condensateur céramique | C 503, 543, 541, 801, 802 | 33 P | 595.535–315 |
| 12 | Keramikkondensator | Ceramic capacitor | Condensateur céramique | C 504 | 100 P | 595.551–315 |
| 13 | Keramikkondensator | Ceramic capacitor | Condensateur céramique | C 505, 524, 507 | 2 N 2 | 596.124–315 |
| 14 | Keramikkondensator | Ceramic capacitor | Condensateur céramique | C 510, 528, 534 | 100 P | 595.578–315 |
| 15 | Keramikkondensator | Ceramic capacitor | Condensateur céramique | C 511 | 680 P | 595.519–315 |
| 16 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 513 | 1 N | 595.594–314 |
| 17 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 514 | 8 N 2 | 595.640–314 |
| 18 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 515 | 15 N | 596.078–314 |
| 19 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 516, 532 | 56 N | 596.094–314 |
| 20 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 518 | 47 N | 596.086–314 |
| 21 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 519, 523, 524 | 2 N 2 | 595.616–314 |
| 22 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 520, 536 | 4 N 7 | 595.632–314 |
| 23 | Folienkkondensator | Foil capacitor | Condensateur à feuille | C 521 | 3 N 3 | 595.624–314 |
| 24 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 530 | 82 N | 596.108–314 |
| 25 | Keramikkondensator | Ceramic capacitor | Condensateur céramique | C 531 | 22 P | 595.527–315 |
| 26 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 535 | 1 N 8 | 595.608–314 |
| 27 | Keramikkondensator | Ceramic capacitor | Condensateur céramique | C 542 | 1 N 8 | 596.116–315 |
| 28 | Keramikkondensatorchip | Ceramic capacitor chip | Condensateur céramique de chip | C 654, 663 | 33 N | 596.140–315 |
| 29 | Keramikkondensatorchip | Ceramic capacitor chip | Condensateur céramique de chip | C 655, 656 | 10 N | 596.132–315 |
| 30 | Keramikkondensatorchip | Ceramic capacitor chip | Condensateur céramique de chip | C 658, 659 | 22 P | 596.159–315 |
| 31 | Keramikkondensatorchip | Ceramic capacitor chip | Condensateur céramique de chip | C 664, 665 | 56 P | 596.167–315 |
| 32 | Keramikkondensatorchip | Ceramic capacitor chip | Condensateur céramique de chip | C 751 | 47 N | 558.680–315 |
| | | | | | oder/or/ou | 369.055–315 |
| 33 | Keramikkondensatorchip | Ceramic capacitor chip | Condensateur céramique de chip | C 752 | 680 P | 558.672–315 |
| | | | | | oder/or/ou | 558.877–315 |
| 34 | Keramikkondensatorchip | Ceramic capacitor chip | Condensateur céramique de chip | C 753 | 22 N | 338.826–315 |
| | | | | | oder/or/ou | 367.699–315 |
| 35 | Keramikkondensator | Ceramic capacitor | Condensateur céramique | C 805 | 1 N | 595.500–315 |
| 36 | Keramikkondensatorchip | Ceramic capacitor chip | Condensateur céramique de chip | C 903 | 47 N | 558.680–315 |
| | | | | | oder/or/ou | 339.055–315 |
| 37 | Keramikkondensatorchip | Ceramic capacitor chip | Condensateur céramique de chip | C 923, 924, 925 | 220 N | 558.516–315 |
| | | | | | oder/or/ou | 558.494–315 |
| | | | | | oder/or/ou | 558.508–315 |
| 38 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 927 | 150 N | 392.510–314 |

## Ersatzteile-Liste – Spare Parts List – Liste des pièces de rechange

| Lfd. Nr. Item. No. Pos. No. | Benennung | Denomination | Dénomination | Pos. i. Schaltb. Diagram pos. Pos. dans le schéma | Artikel-Nr. Article No. No. d'article | Best.-Nr. Part. No. No. de commande |
|---|---|---|---|---|---|---|
| | **Elkos** | **Elcos** | **Elcos** | | | |
| 1 | Elko | Elco | Elco | C 1, 2, 3 | 220 U | 595.667–312 |
| 2 | Elko | Elco | Elco | C 4, 5 | 47 U | 595.675–312 |
| 3 | Elko | Elco | Elco | C 6, 7 | 1 M | 595.802–312 |
| 4 | Elko | Elco | Elco | C 8, 9 | 22 U | 595.896–312 |
| 5 | Elko | Elco | Elco | C 102, 105, 313, 544, 545, 553, 554 | 10 U | 595.764–312 |
| 6 | Elko | Elco | Elco | C 104, 307 | 33 U | 595.810–312 |
| 7 | Elko | Elco | Elco | C 109 | 10 U | 595.871–312 |
| 8 | Tantal-Elko | Tantal-Elco | Tantal-Elco | C 202 | 33 U | 595.977–313 |
| 9 | Tantal-Elko | Tantal-Elco | Tantal-Elco | C 301, 309, 653, 661 | 33 U | 596.000–313 |
| 10 | Elko | Elco | Elco | C 302, 306, 501, 506, 508, 526, 555, 556, 557, 558 | 33 U | 595.780–312 |
| 11 | Tantal-Elko | Tantal-Elco | Tantal-Elco | C 303, 538, 543 | 1 U | 596.019–313 |
| 12 | Elko | Elco | Elco | C 305, 452, 451 | 47 U | 595.829–312 |
| 13 | Elko | Elco | Elco | C 308 | 220 U | 595.659–312 |
| 14 | Elko | Elco | Elco | C 402 | 22 U | 595.845–312 |
| 15 | Elko | Elco | Elco | C 453 | 3 U 3 | 595.756–312 |
| 16 | Elko | Elco | Elco | C 517, 564 | 22 U | 595.772–312 |
| 17 | Elko | Elco | Elco | C 522 | 1 U | 595.731–312 |
| 18 | Tantal-Elko | Tantal-Elco | Tantal-Elco | C 525 | 10 U | 595.969–313 |
| 19 | Elko | Elco | Elco | C 533, 563 | 2 U 2 | 595.748–312 |
| 20 | Elko | Elco | Elco | C 539, 546, 552 | 33 U | 595.985–313 |
| 21 | Tantal-Elko | Tantal-Elco | Tantal-Elco | C 549, 551 | 3 U 3 | 595.942–313 |
| 22 | Tantal-Elko | Tantal-Elco | Tantal-Elco | C 550 | 4 U 7 | 595.950–313 |
| 23 | Tantal-Elko | Tantal-Elco | Tantal-Elco | C 559, 562 | 3 U 3 | 596.027–312 |
| 24 | Elko | Elco | Elco | C 560 | 22 U | 595.993–313 |
| 25 | Elko | Elco | Elco | C 561 | U 33 | 595.713–312 |
| 26 | Elko | Elco | Elco | C 651, 667 | 100 U | 595.802–312 |
| 27 | Elko | Elco | Elco | C 652, 529 | 0 U 1 | 595.705–312 |
| 28 | Elko | Elco | Elco | C 660, 666, 803, 804 | 33 U | 595.799–312 |
| 29 | Tantalchip | Tantalchip | Tantalchip | C2 751 | 3 U 3 | 596.043–313 |
| 30 | Tantalchip | Tantalchip | Tantalchip | C2 753 | 1 U | 596.035–313 |
| 31 | Tantalchip | Tantalchip | Tantalchip | C 755 | 4 U 7 | 596.051–313 |
| 32 | Tantalchip | Tantalchip | Tantalchip | C 2901 | 4 U 7 | 566.535–313 |
| | | | | | oder/or/ou | 566.543–313 |
| 33 | Tantalchip | Tantalchip | Tantalchip | C 2902 | 22 U | 558.486–313 |
| | | | | | oder/or/ou | 572.434–313 |
| 34 | Tantalchip | Tantalchip | Tantalchip | C 2904 | 4 U 7 | 566.535–313 |
| | | | | | oder/or/ou | 566.543–313 |
| 35 | Tantalchip | Tantalchip | Tantalchip | C 2921, C 2922 | 15 U | 558.478–313 |
| | | | | | oder/or/ou | 572.926–313 |
| 36 | Tantalchip | Tantalchip | Tantalchip | C 2926 | 15 U | 558.478–313 |
| | | | | | oder/or/ou | 572.926–313 |
| 37 | Elko | Elco | Elco | C 951,952 | 470 U | 595.691–312 |





## Ersatzteile-Liste – Spare Parts List – Liste des pièces de rechange

| Lfd. Nr. Item. No. Pos. No. | Benennung | Denomination | Dénomination | Pos. i. Schaltb. Diagram pos. Pos. dans le schéma | Artikel-Nr. Article No. No. d'article | Best.-Nr. Part. No. No. de commande |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| 38 | Folienkondensator | Foil capacitor | Condensateur à feuille | C 927 | 150 N<br>oder/or/ou | 558.508–315<br>392.510–314 |

## Ersatzteile-Liste – Spare Parts List – Liste des pièces de rechange

| Lfd. Nr.<br>Item. No.<br>Pos. No. | Benennung | Denomination | Dénomination | Pos. i. Schaltb.<br>Diagram pos.<br>Pos. dans le schéma | Artikel-Nr.<br>Article No.<br>No. d'article | Best.-Nr.<br>Part. No.<br>No. de commande |
|---|---|---|---|---|---|---|
| | **Elkos** | **Elcos** | **Elcos** | | | |
| 1 | Elko | Elco | Elco | C 1, 2, 3 | 220 U | 595.667–312 |
| 2 | Elko | Elco | Elco | C 4, 5 | 47 U | 595.675–312 |
| 3 | Elko | Elco | Elco | C 6, 7 | 1 M | 595.802–312 |
| 4 | Elko | Elco | Elco | C 8, 9 | 22 U | 595.896–312 |
| 5 | Elko | Elco | Elco | C 102, 105, 313, 544, 545, 553, 554 | 10 U | 595.764–312 |
| 6 | Elko | Elco | Elco | C 104, 307 | 33 U | 595.810–312 |
| 7 | Elko | Elco | Elco | C 109 | 10 U | 595.871–312 |
| 8 | Tantal-Elko | Tantal-Elco | Tantal-Elco | C 202 | 33 U | 595.977–313 |
| 9 | Tantal-Elko | Tantal-Elco | Tantal-Elco | C 301, 309, 653, 661 | 33 U | 596.000–313 |
| 10 | Elko | Elco | Elco | C 302, 306, 501, 506, 508, 526, 555, 556, 557, 558 | 33 U | 595.780–312 |
| 11 | Tantal-Elko | Tantal-Elco | Tantal-Elco | C 303, 538, 543 | 1 U | 596.019–313 |
| 12 | Elko | Elco | Elco | C 305, 452, 451 | 47 U | 595.829–312 |
| 13 | Elko | Elco | Elco | C 308 | 220 U | 595.659–312 |
| 14 | Elko | Elco | Elco | C 402 | 22 U | 595.845–312 |
| 15 | Elko | Elco | Elco | C 453 | 3 U 3 | 595.756–312 |
| 16 | Elko | Elco | Elco | C 517, 564 | 22 U | 595.772–312 |
| 17 | Elko | Elco | Elco | C 522 | 1 U | 595.731–312 |
| 18 | Tantal-Elko | Tantal-Elco | Tantal-Elco | C 525 | 10 U | 595.969–313 |
| 19 | Elko | Elco | Elco | C 533, 563 | 2 U 2 | 595.748–312 |
| 20 | Elko | Elco | Elco | C 539, 546, 552 | 33 U | 595.985–313 |
| 21 | Tantal-Elko | Tantal-Elco | Tantal-Elco | C 549, 551 | 3 U 3 | 595.942–313 |
| 22 | Tantal-Elko | Tantal-Elco | Tantal-Elco | C 550 | 4 U 7 | 595.950–313 |
| 23 | Tantal-Elko | Tantal-Elco | Tantal-Elco | C 559, 562 | 3 U 3 | 596.027–312 |
| 24 | Elko | Elco | Elco | C 560 | 22 U | 595.993–313 |
| 25 | Elko | Elco | Elco | C 561 | U 33 | 595.713–312 |
| 26 | Elko | Elco | Elco | C 651, 667 | 100 U | 595.802–312 |
| 27 | Elko | Elco | Elco | C 652, 529 | 0 U 1 | 595.705–312 |
| 28 | Elko | Elco | Elco | C 660, 666, 803, 804 | 33 U | 595.799–312 |
| 29 | Tantalchip | Tantalchip | Tantalchip | C2 751 | 3 U 3 | 596.043–313 |
| 30 | Tantalchip | Tantalchip | Tantalchip | C2 753 | 1 U | 596.035–313 |
| 31 | Tantalchip | Tantalchip | Tantalchip | C 755 | 4 U 7 | 596.051–313 |
| 32 | Tantalchip | Tantalchip | Tantalchip | C 2901 | 4 U 7<br>oder/or/ou | 566.535–313<br>566.543–313 |
| 33 | Tantalchip | Tantalchip | Tantalchip | C 2902 | 22 U<br>oder/or/ou | 558.486–313<br>572.434–313 |
| 34 | Tantalchip | Tantalchip | Tantalchip | C 2904 | 4 U 7<br>oder/or/ou | 566.535–313<br>566.543–313 |
| 35 | Tantalchip | Tantalchip | Tantalchip | C 2921, C 2922 | 15 U<br>oder/or/ou | 558.478–313<br>572.926–313 |
| 36 | Tantalchip | Tantalchip | Tantalchip | C 2926 | 15 U<br>oder/or/ou | 558.478–313<br>572.926–313 |
| 37 | Elko | Elco | Elco | C 951,952 | 470 U | 595.691–312 |





## Ersatzteile-Liste – Spare Parts List – Liste des pièces de rechange

| Lfd. Nr.<br>Item. No.<br>Pos. No. | Benennung | Denomination | Dénomination | Pos. i. Schaltb.<br>Diagram pos.<br>Pos. dans le schéma | Artikel-Nr.<br>Article No.<br>No. d'article | Best.-Nr.<br>Part. No.<br>No. de commande |
|---|---|---|---|---|---|---|
| | **Widerstandchip** | **Resistor chip** | **Résistance de chip** | | | |
| 1 | Widerstandchip | Resistor chip | Résistance de chip | R 116, 657, 663 | 1 k | 596.264–323 |
| 2 | Widerstandchip | Resistor chip | Résistance de chip | R 516 | 15 k | 596.345–323 |
| 3 | Widerstandchip | Resistor chip | Résistance de chip | R 617 | 6 k 2 | 596.302–323 |
| 4 | Widerstandchip | Resistor chip | Résistance de chip | R 618, 655, 672, 673, 759 | 10 k | 596.329–323 |
| 5 | Widerstandchip | Resistor chip | Résistance de chip | R 619, 660, 751, 752, 753 | 1 M | 596.450–323 |
| 6 | Widerstandchip | Resistor chip | Résistance de chip | R 651, 652 | 10 R | 596.231–323 |
| 7 | Widerstandchip | Resistor chip | Résistance de chip | R 653 | 2 k 2 | 596.272–323 |
| 8 | Widerstandchip | Resistor chip | Résistance de chip | R 654 | 560 R | 596.256–323 |
| 9 | Widerstandchip | Resistor chip | Résistance de chip | R 656 | 3 k 9 | 596.280–323 |
| 10 | Widerstandchip | Resistor chip | Résistance de chip | R 658 | 56 k | 596.371–323 |
| 11 | Widerstandchip | Resistor chip | Résistance de chip | R 659 | 2 M | 596.469–323 |
| 12 | Widerstandchip | Resistor chip | Résistance de chip | R 661 | 45 k | 596.361–323 |
| 13 | Widerstandchip | Resistor chip | Résistance de chip | R 662 | 470 k | 596.442–323 |
| 14 | Widerstandchip | Resistor chip | Résistance de chip | R 664 | 22 k | 596.353–323 |
| 15 | Widerstandchip | Resistor chip | Résistance de chip | R 665 | 13 k | 596.337–323 |
| 16 | Widerstandchip | Resistor chip | Résistance de chip | R 666 | 8,2 k | 596.310–323 |
| 17 | Widerstandchip | Resistor chip | Résistance de chip | R 667 | 200 k | 596.401–323 |
| 18 | Widerstandchip | Resistor chip | Résistance de chip | R 669 | 390 k | 549.434–323 |
| 19 | Widerstandchip | Resistor chip | Résistance de chip | R 670 | 270 k | 596.426–323 |
| 20 | Widerstandchip | Resistor chip | Résistance de chip | R 671 | 100 k | 596.388–323 |
| 21 | Widerstandchip | Resistor chip | Résistance de chip | R 675 | 240 k | 596.418–323 |
| 22 | Widerstandchip | Resistor chip | Résistance de chip | R 676 | 160 k | 596.396–323 |
| 23 | Widerstandchip | Resistor chip | Résistance de chip | R 677 | 47 R | 596.248–323 |
| 24 | Widerstandchip | Resistor chip | Résistance de chip | R 2751, 923, 930 | 1 M | 508.438–323 |
| 25 | Widerstandchip | Resistor chip | Résistance de chip | R 2752, 754, 770, 2771, 2772, 922, 924 | 100 k | 558.540–323 |
| 26 | Widerstandchip | Resistor chip | Résistance de chip | R 2753, 2759, 2760, 2761, 913 | 4 k 7 | 558.761–323 |
| 27 | Widerstandchip | Resistor chip | Résistance de chip | R 2755 | 1 k 2 | 535.400–323 |
| 28 | Widerstandchip | Resistor chip | Résistance de chip | R 2757 | 22 k | 574.481–323 |
| 29 | Widerstandchip | Resistor chip | Résistance de chip | R 2762, 2763, 2764, 2765, 2766, 2767, 2768, 2789, 2786, 2902, 2903, 2904, 2910, 2911, 2916 | 47 k | 508.421–323 |
| 30 | Widerstandchip | Resistor chip | Résistance de chip | R 2773 | 56 R | 558.710–323 |
| 31 | Widerstandchip | Resistor chip | Résistance de chip | R 2774, 785, 2906, 2915 | 2 k 7 | 558.753–323 |
| 32 | Widerstandchip | Resistor chip | Résistance de chip | R 2775, 2784, 2905, 2909 | 10 k | 558.771–323 |
| 33 | Widerstandchip | Resistor chip | Résistance de chip | R 2776 | 220 R | 558.729-323 |
| 34 | Widerstandchip | Resistor chip | Résistance de chip | R 2777, 2782 | 330 R | 558.737-323 |
| 35 | Widerstandchip | Resistor chip | Résistance de chip | R 2778, 2779 | 12 k | 558.788-323 |
| 36 | Widerstandchip | Resistor chip | Résistance de chip | R 2780, 2781 | 1 k | 558.745-323 |
| 37 | Widerstandchip | Resistor chip | Résistance de chip | R 2783 | 10 R | 558.702-323 |
| 38 | Widerstandchip | Resistor chip | Résistance de chip | R 2901 | 100 R | 559.784-323 |
| 39 | Widerstandchip | Resistor chip | Résistance de chip | R 2907, 2926 | 1 k 5 | 558.532-323 |
| 40 | Widerstandchip | Resistor chip | Résistance de chip | R 2908, 2927 | 820 R | 558.524-323 |
| 41 | Widerstandchip | Resistor chip | Résistance de chip | R 2912 | 15 k | 563.862-323 |
| 42 | Widerstandchip | Resistor chip | Résistance de chip | R 2914 | 120 k | 573.922-323 |
| 43 | Widerstandchip | Resistor chip | Résistance de chip | R 2921, 2929 | 220 k | 558.559-323 |
| 44 | Widerstandchip | Resistor chip | Résistance de chip | R 2925, 2928, 2931 | 470 k | 558.567-323 |

## Ersatzteile-Liste – Spare Parts List – Liste des pièces de rechange

| Ltd. Nr. Item. No. Pos. No. | Benennung | Denomination | Dénomination | Pos. i. Schaltb. Diagram pos. Pos. dans le schéma | Artikel-Nr. Article No. No. d'article | Best.-Nr. Part. No. No. de commande |
|---|---|---|---|---|---|---|
| | **Dioden** | **Diodes** | **Diodes** | | | |
| 1 | Diode | Diode | Diode | D 1, 2 | 1S1585 | 598.996-301 |
| 2 | Diode | Diode | Diode | D 3, 4, 9, 10, 11, 12 | 1SS83 | 598.011-301 |
| 3 | Diode | Diode | Diode | D 5, 6, 7, 8 | ERA 84-009 | 598.054-301 |
| 4 | Diode | Diode | Diode | D 301 | RD10EL3 | 597.971-301 |
| 5 | Diode | Diode | Diode | D 302, 511, 512, 513, 514 | HZ6B1L | 598.070-301 |
| 6 | Diode | Diode | Diode | D 501, 502, 653 | HZ2ALL | 598.100-301 |
| 7 | Diode | Diode | Diode | D 503 | KV1236Z2 | 598.038-301 |
| 8 | Diode | Diode | Diode | D 504 | HZ5CLL | 598.119-301 |
| 9 | Diode | Diode | Diode | D 509, 17 | V0-9C | 598.003-301 |
| 10 | Diode | Diode | Diode | D 515, 651, 652, 654 | 1SS106 | 598.089-301 |
| 11 | Diode | Diode | Diode | D 2751-2757/ D 2901/D 2921-2929 | 1N4148 | 558.656-301 |
| 12 | Diode | Diode | Diode | D 871, 872, 873 | SLP-378A | 598.021-301 |
| 13 | Diode | Diode | Diode | D 874 | SLP-935-A | 598.062-301 |
| 14 | Diode | Diode | Diode | D 952 | 10E2 | 597.988-301 |
| 15 | Diode (gepaart) | Diode (in pairs) | Diode (par paires) | D 2902 | AA 143 | 147.291-301 |
| | **LED's, Optokoppler** | **LED's, opto coupler** | **LED's, couplage optique** | | | |
| 1 | LED | LED | LED | D 752, 753, 901, 902 | LS 3140-M-rt | 564.494-304 |
| 2 | LED | LED | LED | D 801, 802 | SLP-935 A | 598.062-301 |
| 3 | LED | LED | LED | D 871, 872, 873 | SLP-378 A | 598.021-301 |
| 4 | LED | LED | LED | D 874 | SLP-935 A | 598.062-301 |
| 5 | Optokoppler Diode | Opto coupler diode | Couplage optique, diode | PH 871 | GP-2504-B | 598.097-301 |
| | **Fototransistor** | **Foto transistor** | **Phototransistor** | | | |
| 1 | Fototransistor | Foto transistor | Phototransistor | Q 871, 872, 873 | PH 102 | 598.151-302 |
| | **Transistoren** | **Transistors** | **Transistors** | | | |
| 1 | Transistor | Transistor | Transistor | Q 101, 201 | 2 Sk 152 | 598.240-302 |
| 2 | Transistor | Transistor | Transistor | Q 455, 456, 457, 518, 519, 520, 522 | DTC 114 EF | 598.283-302 |
| 3 | Transistor | Transistor | Transistor | Q 301 | DTC 114 ES | 598.291-302 |
| 4 | Transistor | Transistor | Transistor | Q 501, 502, 514, 531, 532 | 2SD 1012-F2 | 598.275-302 |
| 5 | Transistor | Transistor | Transistor | Q 503, 506, 508, 510 | 2SB 822 | 598.356-302 |
| 6 | Transistor | Transistor | Transistor | Q 504, 505, 509, 511, 535 | 2SD 1055 | 598.331-302 |
| 7 | Transistor | Transistor | Transistor | Q 512 | 2SD 1077 L | 598.224-302 |
| 8 | Transistor | Transistor | Transistor | Q 513 | 2SB 811 | 598.208-302 |
| 9 | Transistor | Transistor | Transistor | Q 523 | SD 862 | 598.216-302 |
| 10 | Transistor | Transistor | Transistor | Q 524 | 2SB 731 | 598.161-302 |
| 11 | Transistor | Transistor | Transistor | Q 526 | 2SD 773 | 598.178-302 |
| 12 | Transistor | Transistor | Transistor | Q 527 | 2SD 809 | 598.194-302 |
| 13 | Transistor | Transistor | Transistor | Q 528, 534 | 2SC 634 SP | 598.232-302 |
| 14 | Transistor | Transistor | Transistor | Q 651 | 2SB 798 | 598.135-302 |
| 15 | Transistor | Transistor | Transistor | Q 652 | DTA 124 Ek | 598.313-302 |
| 16 | Transistor | Transistor | Transistor | Q 653 | DTC 124 Ek | 598.305-302 |
| 17 | Transistor | Transistor | Transistor | T 2751, 2752, 2901, 2902 | BC 848 | 539.260-302 |
| | | | | | oder/or/ou | 539.252-302 |
| 18 | Transistor | Transistor | Transistor | T 2753, 2754 | BC 858 c | 539.279-302 |
| | | | | | oder/or/ou | 539.287-302 |
| 19 | Transistor | Transistor | Transistor | Q 801, 802, 803, 804 | DTA 124 xk | 598.321-302 |

## Ersatzteile-Liste – Spare Parts List – Liste des pièces de rechange

| Lfd. Nr. Item. No. Pos. No. | Benennung | Denomination | Dénomination | Pos. i. Schaltb. Diagram pos. Pos. dans le schéma | Artikel-Nr. Article No. No. d'article | Best.-Nr. Part. No. No. de commande |
|---|---|---|---|---|---|---|
| | **IC-Bausteine** | **IC-links** | **IC-éléments** | | | |
| 1 | IC-Baustein | IC-link | IC-élément | IC 102, 202 | NJM 4560 M | 598.453–308 |
| 2 | IC-Baustein | IC-link | IC-élément | IC 301 | CX-20133 | 598.380–308 |
| 3 | IC-Baustein | IC-link | IC-élément | IC 302 | TC 4053 BF | 598.429–308 |
| 4 | IC-Baustein | IC-link | IC-élément | IC 502 | CX 23035 | 598.496–308 |
| 5 | IC-Baustein | IC-link | IC-élément | IC 503 | MSM 5128-20 GS | 598.488–308 |
| 6 | IC-Baustein | IC-link | IC-élément | IC 504 | CX 20108 | 598.364–308 |
| 7 | IC-Baustein | IC-link | IC-élément | IC 505 | TC 4001 BF | 598.550–308 |
| 8 | IC-Baustein | IC-link | IC-élément | IC 506, 651 | UPC 4558 G2 | 598.402–308 |
| 9 | IC-Baustein | IC-link | IC-élément | IC 507 | MB 3763 PF | 598.471–308 |
| 10 | IC-Baustein | IC-link | IC-élément | IC 508 | MB 88501-274 M | 598.518–308 |
| 11 | IC-Baustein | IC-link | IC-élément | IC 509 | MB 3761 | 598.461–308 |
| 12 | IC-Baustein | IC-link | IC-élément | IC 652 | CX 20109 | 598.372–308 |
| 13 | IC-Baustein | IC-link | IC-élément | IC 2751 | HEF 4014 BT | 514.276–308 |
| 14 | IC-Baustein | IC-link | IC-élément | IC 2752, 2753 | PCF 2111 T | 514.314–308 |
| 15 | IC-Baustein | IC-link | IC-élément | IC 801 | MB 88501-253 M | 598.501–308 |
| 16 | IC-Baustein | IC-link | IC-élément | IC 901 | HEF 4051 | 598.265–308 |
| 17 | IC-Baustein | IC-link | IC-élément | IC 2902 | HEF 4016 | 598.249–308 |
| | | | | | oder/or/ou HEF 4066 | 774.308–308 |
| 18 | IC-Baustein | IC-link | IC-élément | IC 2903 | HEF 4021 | 558.257–308 |
| 19 | IC-Baustein | IC-link | IC-élément | IC 2904, 2905 | HEF 4014 BT | 514.276–308 |
| 20 | IC-Baustein | IC-link | IC-élément | IC 2906, 2924 | HEF 4011 BT | 374.679–308 |
| 21 | IC-Baustein | IC-link | IC-élément | IC 2921 | HEF 4027 BT | 558.346–308 |
| 22 | IC-Baustein | IC-link | IC-élément | IC 2922 | HEF 4093 BT | 558.354–308 |
| 23 | IC-Baustein | IC-link | IC-élément | IC 2923 | HEF 4001 BT | 558.321–308 |
| 24 | IC-Baustein | IC-link | IC-élément | IC 2925 | HEF 4023 BT | 558.338–308 |
| 25 | IC-Baustein | IC-link | IC-élément | IC 2926 | HEF 40106 BT | 558.362–308 |
| | **Schaltungsplatten** | **Wiring boards** | **Circuits imprimés/Modules** | | | |
| 1 | Hauptschaltplatte | Main board | Circuit général | | | 595.047–373 |
| 2 | HF-Verstärkerplatte | PC-board RF amp. | Circuit amplificateur HF | | | 595.055–373 |
| 3 | Schaltplatte-Verbindung | PC-board connection | Circuit de connexion | | | 596.808–373 |
| 4 | Schaltungsplatte, Schalter | PC-board, switch | Circuit de commutateur | | | 596.817–373 |
| 5 | Schaltungsplatte, DET | PC-board, DET | Circuit DET | | | 596.825–373 |
| 6 | Schaltungsplatte, LED | PC-board, LED | Circuit LED | | | 596.833–373 |
| 7 | Schaltungsplatte, Motor | PC-board, motor | Circuit de moteur | | | 596.841–373 |
| 8 | Schaltungsplatte, DET | PC-board, DET | Circuit DET | | | 596.851–373 |
| 9 | NF-Schaltungsplatte | AF wiring board | Circuit BF | | | 558.036–273 |
| 10 | Verbindungsplatte | Connection board | Circuit de raccordement | | 860 E 4080 | 558.222–373 |
| 11 | Zusatzplatte | Additional board | Circuit additionel | | 860 E 4085 | 558.303–273 |
| 12 | Schaltungsplatte | Wiring board | Circuit | | 860 E 9090 | 558.648–373 |

## Ersatzteile-Liste – Spare Parts List – Liste des pièces de rechange

| Lfd. Nr. Item. No. Pos. No. | Benennung | Denomination | Dénomination | Pos. i. Schaltb. Diagram pos. Pos. dans le schéma | Artikel-Nr. Article No. No. d'article | Best.-Nr. Part. No. No. de commande |
|---|---|---|---|---|---|---|
| | **Potentiometer** | **Potentiometers** | **Potentiomètres** | | | |
| 1 | Potentiometer | Potentiometer | Potentiomètre | RV 501 | 22 k | 596.485–329 |
| 2 | Potentiometer | Potentiometer | Potentiomètre | RV 502 | 10 k | 596.477–323 |
| | **Relais, Reedschalter** | **Relay, Reed switch** | **Relais, commutateur Reed** | | | |
| 1 | Relais | Relay | Relais | RY 301 | | 596.566–336 |
| 2 | Reedschalter | Reed switch | Commutateur Reed | TR S1 | | 596.620–278 |
| | **Drosseln, Transformatoren** | **Chokes, transformators** | **Selfs, transformateurs** | | | |
| 1 | Transformator | Transformator | Transformateur | T 1 | | 595.063–335 |
| 2 | Drossel | Choke | Self | L 1 | | 595.071–334 |
| 3 | Drossel | Choke | Self | L 2, L 3 | | 595.081–334 |
| 4 | Drossel | Choke | self | L 4 | | 595.098–334 |
| 5 | Drossel | Choke | self | L 5 | | 595.101–334 |
| 6 | Drossel | Choke | self | L 6, L 7 | | 595.111–334 |
| 7 | Oszillator-Filterspule | Oscillator filter coil | Bobine à filtre d'oscillateur | L 301 | | 596.323–341 |
| 8 | Oszillator-Filterspule | Oscillator filter coil | Bobine à filtre d'oscillateur | L 501 | | 596.515–331 |
| | **Quarze** | **Quartz** | **Quartz** | | | |
| 1 | Quarz | Quartz | Quartz | X 301 | | 596.582–342 |
| 2 | Quarz | Quartz | Quartz | X 501 | | 596.760–342 |
| 3 | Quarz | Quartz | Quartz | X 801 | | 596.752–345 |
| | **Kabel, Stecker** | **Cables, plugs** | **Câbles, fiches** | | | |
| 1 | Anschluß (13 pol.) | Connection (13 pol.) | Raccordement (13 pôles) | CNJ 1 | | 596.711–277 |
| 2 | Anschlußbuchse | Connection socket | Prise de raccordement | CNJ 2 | | 596.698–277 |
| 3 | Anschlußbuchse | Connection socket | Prise de raccordement | CNJ 3 | | 596.701–277 |
| 4 | Anschlußbuchse | Connection socket | Prise de raccordement | CNP 1 | | 596.736–277 |
| 5 | Anschlußstift (7 pol.) | Connection pin (7 pol.) | Cheville de raccordement (7 pôles) | CNP 4 | | 596.681–277 |
| 6 | Anschlußbuchse (2 pol.) | Connection socket (2 pol.) | Prise de raccordement (2 pôles) | CNP 5 | | 596.655–277 |
| 7 | Anschlußstift (3 pol.) | Connection pin (3 pol.) | Cheville de raccordement (3 pôles) | CNP 6 | | 596.663–277 |
| 8 | Anschlußbuchse (2 pol.) | Connection socket (2 pol.) | Prise de raccordement (2 pôles) | CNP 7 | | 596.655–277 |
| 9 | Testadapterkabel | Test adapter cable | Câble d'adaptateur de test | | | 595.306–276 |
| 10 | Testadapterkabel | Test adapter cable | Câble d'adaptateur de test | | | 595.314–276 |
| 11 | Testadapterkabel | Test adapter cable | Câble d'adaptateur de test | | | 595.330–276 |
| 12 | Testadapterkabel | Test adapter cable | Câble d'adaptateur de test | | | 595.349–276 |
| 13 | Testadapterkabel | Test adapter cable | Câble d'adaptateur de test | | | 595.357–276 |
| 14 | Testadapterkabel | Test adapter cable | Câble d'adaptateur de test | | | 595.365–276 |
| | **Sonstiges** | **Other parts** | **Autres pièces** | | | |
| 1 | Tiefpaßfilter | Low-pass filter | Filtre passe-pas | | | 596.541–341 |
| 2 | NF-Überträger kpl. | AF transformator cpl. | Transformateur BF cpl. | | | 569.321–335 |
| | | | | | oder/or/ou | 569.410–335 |
| 3 | Anschlußkabel 18 adr. | Connection cord (18 pol.) | Câble de raccordement (18 pôles) | | | 558.850–276 |
| 4 | Anschlußkabel 6 adr. | Connection cord ( 6 pol.) | Câble de raccordement ( 6 pôles) | | | 558.869–276 |
| 5 | Stirnwand | Front face | Avant | | | 556.203-285 |